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THE UNITED STATES Department of Labor, through the Information and Education Service, is issuing the results of a study of prices during the war and readjustment period made by the Division of Public Works and Construction Development. Discussing the Civil War period as a precedent for war prices, the report says that a comparison of the course of prices during the Civil War and the present war shows many points of similarity during the two war periods. The course of prices during the present period of readjustment and the corresponding period following the Civil War show more points of difference than of similarity.

During both wars the wholesale prices of commodities in general rose steadily through the war period. The rise during the Civil War period, taking the year 1860 as the base, runs up to somewhat higher level than the rise during the present war. In both wars, building materials rose in price, but they did not at either time reach levels as high as the price levels of other commodities.

At the beginning of the year 1865, the end of the Civil War being in sight, wholesale prices broke suddenly and violently. During the first six months of the year, prices in general fell off 27 per cent from the high level of January. However, the break in wholesale prices, though unprecedented in violence and accompanied by the unsettling influence of the end of the great war, produced no business crisis or depression. Through the latter half of 1865 prices recovered from the low point until in January, 1866, they stood just 16 per cent below the level of January, 1865. From the beginning of 1866 prices dropped slowly downward. They did not reach the pre-war level until the year 1878. As is well known, during that period of inflated currency, gold was at a premium. However, commodity prices remained above the prices of gold up to and including the year 1877.

Building materials declined in price along with other commodities during the first half of the year 1865. However, the fall was less than in the case of other commodities. Whereas commodities in general dropped 27 per cent, building materials dropped only 14½ per cent. The recovery during the second half of the year was more marked, prices of building materials returning to the level of the last quarter of the year 1864, and remaining at that level for period of a year before the decline set in. The index figure for the building materials group remained higher than that for all commodities up to and including the year 1874.

The currency was on a distinctly unsound basis in the Civil War reconstruction period. The sharp fluctuations in prices gave rise to much speculation and the opportunities for development of the resources of the country, such as unused land, rivers and harbors, building of railroads, led to over-expansion of business resulting in the Financial Panic of 1873. This Panic was not accompanied by any sharp decline in prices.

As was stated above, it was thirteen years after the Civil War before prices returned to the prewar level. The principal cause of the return to the prewar level was the fact that there was such abundant opportunity for the development of new and more economic methods of production in the shape of new forms of machinery and new kinds of business organizations. These opportunities we do not have at the present day in any measure comparable with the previous period.

THE GREAT HUMANITARIAN trend that has developed as an aftermath of the horrors of the war has awakened the peoples of all countries to the immediate need for developing these humanitarian efforts along the broadest lines.

The amazing percentage of men rejected for military service because of physical conditions that might easily have been prevented; the pitiful wastage of manhood and womanhood through under-nourished and under-developed childhood; the terrible mortality consequent on epidemics which, if not actually preventable would at least have been more controllable if humanity at large had a better understanding of hygiene and sanitation, all these things have been brought so forcibly before the minds of thinking people that remedial efforts are not only necessary but imperative.

To turn to the Red Cross as a medium through whom this widespread educational campaign may be carried on all over the globe is a natural result. Closely in touch with every phase of relief, whether it be war, disaster, epidemic or the personal contact with individuals maintained through the special branches of its work, the Red Cross is peculiarly well fitted to aid in this international service.

At the present time there is in session at Cannes, France, a conference attended by some of the foremost specialists of the medical and sanitary professions of Great Britain, France, Italy, Japan and the United States.

The problem which these men are discussing is one of the most serious ever faced by the Red Cross, and deals with the organization of an International Coun-

Red Cross
Continues
Its Tasks.

cil and Bureau of Hygiene and Public Health which will consider the work to be undertaken in connection with the prevention of epidemic disease, tuberculosis, venereal disease and child welfare. The results of this conference will be submitted to the International Conference of Red Cross Societies to be held at Geneva, Switzerland, thirty days after peace is officially declared. This Red Cross Committee will be composed of representatives from the Red Cross Societies of the five countries represented at Cannes and Henry P. Davison, formerly Chairman of the War Council of the American Red Cross, will act as Chairman.

The outgrowth of this congress will be a permanent working organization, with headquarters in Geneva, whose personnel will be made up of experts who will keep in touch with the developments throughout the world of the various matters in which the Red Cross is interested and through whom each Red Cross organization will be kept in touch with the march of human events. Not only will the peace activities of the Red Cross be directed toward the relief of human suffering and its prevention, but an effort will be made to arouse all peoples to a sense of their responsibility for the welfare of their fellow beings.

Although peace conditions have brought to the Red Cross a service less spectacular than that which prevailed during the war, they have increased rather than diminished the breadth of its possibilities. The peoples of all countries, aroused by the horrors that confront them on every side, are in a receptive mood. Evils of improper sanitation, hygiene and child welfare are in the public eye and the pitiful condition not only of individuals but of entire nations in the war-ridden countries is such as to open the eyes of the world to the need for a program greater and more far reaching than any planned heretofore. Devastated Poland, diseased Serbia, Russia, struggling under a thousand ills, all call to humanity for relief.

Immediate needs are pressing through all the foreign countries and the Red Cross is meeting them with unflinching promptness. Nine hospitals with a total staff of fifty Red Cross nurses have been established in northern Serbia. Twelve hundred convalescent and young children are being fed daily in the Armenian refuge at Port Said from recently established diet kitchens and employment is being found for those who are able to work. Huge warehouses have been established in the ravaged regions of France, stocked with tons of clothing and household utensils in order that the French Government may call upon them for auxiliary supplies in their efforts to start these desolate people in life once more.

Even the terrible conditions prevailing in Russia find the Red Cross undismayed. The sixth American Red Cross supply train of twenty-six cars, carrying clothing, blankets and medicines valued at \$38,000, is even now moving across Siberia and arrangements have been made to send large stores of clothing, medical and surgical supplies and food as rapidly as possible. Twenty-five hundred tons of supplies have already gone forward and more will follow as soon as they can be moved.

Out from the reeking filth of prison camps men are struggling back to life. Food, clothing, medical at-

tention and shelter are their crying need. These are furnished by the Red Cross in the form of sanitary trains for stretcher cases, canteens and mobile hospitals.

Acting on the principle that a large percentage of the disease of the world is preventable, a nation-wide movement is about to be inaugurated in the United States for the promotion of public health. Information will be spread by lectures given by Red Cross nurses on Chautauqua circuits, which will be followed up in the smaller communities by nursing squads who will organize public health committees or render auxiliary aid if desired, where such committees have already been established. Every assistance will be given to communities in organizing and maintaining this service.

IT HAS BEEN determined by Malcolm Kerr, professor of the University of Pennsylvania, that the average net profit of retail merchants is seven per cent. On a business of \$12,000 a year, this would mean an annual income of only \$840, or a few cents more than \$16 a week. There are many small hardware stores which do not do a gross business of more than a thousand dollars a month. As a matter of fact, there are hundreds of hardware dealers in America whose net weekly income is considerably less than the weekly wages of a skilled mechanic. The remedy for this deplorable state of affairs is within the power of the dealer himself. It consists in more efficient management. In other words, the retailer who desires to increase his net income must reduce his overhead expenses to a minimum and distribute that minimum over a greater number of sales. By the use of proper publicity methods in connection with standardized commodities chosen with a view to the average requirements of his trade, he can accelerate the rate of his turnover to a degree which will lift his net income to a comfortable level of competence.

WORKING TOGETHER FOR the common good of a neighborhood is a form of cooperation easy of accomplishment. The results are gratifying to all concerned. For example, the hardware merchant who deals in automobile accessories often gets inquiries about radiator repairs. If he refers his customers to some one outside of the neighborhood, he deprives his community of a profit part of which, in the course of its circulation, might have come back to his own store in the shape of payment for some article of hardware. On the other hand, by sending the customer to a local sheet metal shop, he keeps the profit within the community. The owner of the sheet metal shop will, in all probability, return the courtesy by directing his customers to the hardware store for tools, nails, building supplies, or other requirements. A specific instance will illustrate this community cooperation. A motorist wanted to get a dash ventilator similar to those used on Kissel and Daniels cars. The hardware man told him that the dash ventilator is built into the body of those cars and can not be bought ready made. He told him to go to the local sheet metal shop and

have one made to order. The same customer casually mentioned to the sheet metal man that he wanted a gradometer for his car. The sheet metal man informed him that the hardware man could get one for him on short notice. The hardware man sold the motorist a good gradometer. The motorist was pleased with the excellent service rendered him—and the profits of the double transaction remained in the community.

RANDOM NOTES AND SKETCHES.

By Sidney Arnold.

The other day a street car conductor passed away in Chicago. For twenty-three years he served on one line. He had a friendly word of greeting for everyone who entered his car. He took special care of children and old folk. The newspapers gave him a whole column when he reached the end of life's run—more than they bestow upon great generals or famous artists, and all because he daily practiced cheerfulness toward the people whom he served.

* * *

My friend David M. Haines of Chicago, Illinois, prominent in sheet metal organization circles, never indulges in boasting of any sort. In fact, he is opposed to it on general principles. He cites an example of its evil disastrous consequences in the following story:

"My little girl is very clever," said a lady to her guests. "She can imitate almost any one."

"She can indeed," echoed the husband proudly. "Come, my dear, show us what you can do. Pretend to be the housemaid."

The little girl then demonstrated her undoubted cleverness by giving a most realistic impersonation, greatly to the amusement of the guests.

"Go on, my dear," chuckled the proud father.

Backing away from her father, she exclaimed, in a terrified tone:

"Sir, let me go! Don't touch me, sir! Let me go! Give you a kiss, indeed; supposing missus was to hear you?"

Then the clever darling was suddenly bundled out of the room.

* * *

Looking over an old scrapbook the other day, my friend C. H. Bicalky of the Bicalky Fan Company, Buffalo, New York, came across the amusing clipping herewith reproduced:

A subscriber wrote as follows to a newspaper:

"Please send me a few copies of the paper containing the obituary of my aunt. Also publish the enclosed clipping of the marriage of my niece who lives in Lebanon. And I wish you would mention in your local column, if it does not cost anything, that I have two bull calves for sale. As my subscription is out, please stop my paper. Times are too bad to waste money on newspapers."

* * *

Brace Hayden of San Francisco, California, first vice-president National Hardware Association, relates a good Whistler story which is new to me:

The great artist Whistler had a poodle dog of which

he was inordinately fond. The dog contracted an affection of the throat, and the artist had the audacity to send for the great throat specialist, Sir Morrell Mackenzie.

Sir Morrell, when he saw that he had been called in to treat a dog didn't like it much, but he said nothing. He treated the animal, pocketed a large fee and went away.

The next day he sent post haste for Whistler, and the latter, thinking he had been called on some matter connected with his beloved pet, dropped his work and rushed to Mackenzie.

On his arrival Sir Morrell said gravely:

"How do you do, Mr. Whistler? I wanted to see you about having my front floor painted."

* * *

One cannot be sure what slant a child's mind will take in any given set of circumstances, declares my friend John J. Schneider of the Buffalo Sled Company, North Tonawanda, New York. To illustrate, he tells this story:

Mrs. Edgerton always impressed upon her little daughter Bessie that when she was naughty it was Satan who made her so.

One day Bessie was particularly naughty, and finally there was considerable disturbance in the nursery, with much stamping of tiny feet and derangement of the furniture. Mrs. Edgerton hastened to learn the cause of the noise.

"Why, Bessie," cried the mother, "what does this mean?"

"Oh," replied Bessie, "I s'pose it's your old friend Satan again!"

* * *

Civilization would begin to crumble away, even as the splendid empires of Egypt and Assyria went to pieces, if there were no further possibilities of betterment in the lives of the people who make up today's population of the globe. In other words, if opportunity for development were no longer plentiful, progress would cease and decay set in everywhere. Fortunately, the chances for advancement were never so numerous as they are in our time. This thought has been well expressed by Berton Braley, the poet of forge and shop, in the subjoined verses:

Opportunity Is Multiple.

With doubt and dismay you are smitten,
You think there's no chance for you, son?
Why, the best books haven't been written,
The best race hasn't been run;
The best score hasn't been made yet,
The best song hasn't been sung;
The best tune hasn't been played yet,
Cheer up, for the world is young!

No chance? Why the world is just eager
For things that you ought to create,
Its store of true wealth is still meager,
Its needs are incessant and great;
It yearns for more power and beauty,
More laughter and love and romance,
More loyalty, labor and duty,
No chance—why there's nothing but chance!

For the best verse hasn't been rhymed yet,
The best house hasn't been planned;
The highest peak hasn't been climbed yet,
The mightiest rivers aren't spanned;
Don't worry and fret, faint hearted,
The chances have just begun,
For the best jobs haven't been started,
The best work hasn't been done.

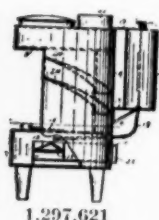
UP TO THE MINUTE NEWS SIFTINGS

STOVE TRADE SHOWS IMPROVEMENT.

The beginning of activity among the building trades, together with the approach of warmer weather, are causes of stimulating business. Trade in gas ranges and water heaters shows improvement at wholesale and retail. Oil cook stoves are also moving better at wholesale. The trade predicts a big business in gas ranges, water heaters, and oil cook stoves during the next few months. There is also a good call at wholesale for combination coal and gas ranges. Builders are making active inquiry.

SECURES PATENT FOR STOVE.

Under number 1,297,621, United States patent rights have been granted to Richard Esau White, Houston Heights, Texas, for a stove described herewith:



A stove including an upper and a lower chamber spaced apart, and a flue arcuate in cross section connecting said chambers, spiraled baffles in the flue arranged in staggered relation, an inclosure in the front part of the lower chamber composed of four walls extending from the top to the bottom of said chamber, the rear wall and the rear portion of the chamber having aligned transverse openings therethrough, a removable draft-pan inserted through said openings and extending up to the front wall of the inclosure, said pan having an opening in the top thereof and a draft inlet in the rear end thereof, a removable conical shaped burner mounted on the pan above the opening in the top thereof, said burner being perforated, and its upper side being provided with upwardly extending flanges to retard the flow of oil thereover, the walls of said inclosure having outlet orifices on each side above said burner, a fuel receptacle, a feed pipe leading therefrom and extending into the lower chamber and the inclosure therein and discharging on said burner, the top of the lower chamber having an opening to permit access to the burner and a removable covering for said openings.

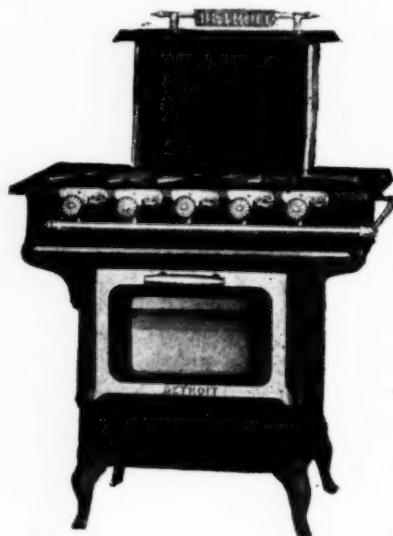
LAW REQUIRES TAXES BE DEDUCTED FROM ALIEN WORKER'S WAGES.

It is not generally known that a provision in the new revenue law requires employers of nonresident aliens to deduct 8 per cent from the wages of such employees for federal taxes. Revenue officials hold that an alien is a nonresident when he openly admits he is a transient or when his acts and conduct indicate that he intends to remain in this country but temporarily. Certificates from the alien are required but in case of doubt further investigation is required and is

advisable since the law holds the employer liable for the war tax under the nonresident alien provision. The revenue bureau fixes residence in the country one year immediately prior to the time of entering the employ of the present employer or employment in the same city for three years before entering the present employment, as sufficient to place the alien in the resident class. On May 1 employers of nonresident aliens must make a return to the internal revenue bureau stating the amount of tax deductions at the rate of 2 per cent from January 1, 1918, to February 24, 1919, and at the rate of 8 per cent from February 24, 1919. First installment of the payment will be due June 15.

IS PROOF AGAINST EXPLOSION.

The Detroit Vapor Oil Stove, shown in the accompanying illustration, and made by The Detroit Vapor Stove Company, Detroit, Michigan, is said to be very safe, there being no possibility of an explosion. The fuel flows to the burner through heavy wrought iron pipes. The valves on the stove are automatically



Detroit Vapor Oil Stove, Made by The
Detroit Vapor Stove Company,
Detroit, Michigan.

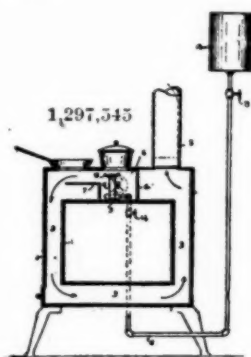
locked the moment they are turned off, and all the joints are threaded and soldered. There is no chance for the fuel to accumulate as it flows directly into the burner. While the stove is burning, the tank can be refilled without danger. The cheaper grades of fuel, as well as the best, can be burned by the Detroit Vapor Oil Stove.

which makes it very economical. All heat is held to the cooking utensils by patented heat condensers. The burner mixes the air freely with the fuel and like a carbureter forms a gas containing the maximum amount of air. The burners weigh 8½ pounds each and are made of heavy grey annealed iron. The Detroit Vapor Oil Stove has no wicks, wick substitutes, or asbestos rings. The valves are all in front of the stove and there is a fuel tank in back of the shelf. Dealers would do well to address The Detroit Vapor Stove Company, Detroit, Michigan, for further particulars.

Unless you have more dollars than sense, do not expect others to consider your troubles interesting.

COOKING STOVE IS PATENTED.

Charles F. Cook, Houston Heights, Texas, has procured United States patent rights, under number 1,297,545, for a cooking stove, described in the following:



A stove whose walls are formed of sheet metal, an oven formed of top, bottom, front and rear walls extending from end to end of the stove but spaced from the corresponding walls forming a flue around the oven, a transverse partition between the top of said oven and the top of the stove, a smoke outlet communicating with the flue on one side of said partition, a combustion chamber on the other side of said partition, the top of the oven forming the bottom wall of the combustion chamber and an apron arranged in front of the combustion chamber and forming the front wall thereof provided to restrict the flue and deflect the blaze up against the top of the stove.

THERE ARE MANY KINDS OF STOVES.

The stove is, comparatively speaking, a new invention. So late as the time of Queen Elizabeth people did not have chimneys; they built their fires in a round hearth in the middle of the room, and when chimneys were introduced the old-fashioned folk all grumbled, because, they said, smoky air was good for colds. But to the eastward stoves of brick and porcelain were commonly used.

A stove made of brick is used in Russia, and in it a slow fire burns all night long. On top of it, when night comes, the peasant and his whole family, in their sheepskins, lie down and go to sleep. It is nice and warm, rather like a window seat that is over a radiator, and sometimes there is a second shelf overhead for any stranger who may be staying overnight.

The brick stove of the Russian peasant, in all probability, came overland from China too long ago to talk about, for the Chinese have stoves of brick and clay shaped something like it.

In Japan there is not much need of keeping warm, but whatever stoves there are in a Japanese home are low, for the life there is all carried on sitting or kneeling on the floor. There is a rough clay stove, made especially for the great rice kettle, and costs only a few cents, and when broken the poorest can buy another. There is a dainty little charcoal stove on which the cooking is done, and beside it stands a pretty basket filled with the softest and finest charcoal. There is also a small stove or furnace to heat the water for the bath. And still more odd is the little earthen bed stove, used as we use a hot-water bottle shaped like a curled-up cat, and it is called "neko" (the kitten).

The German stove of porcelain, with its curious decorations, has figured in many a story of German life. A porcelain stove will hold the heat a long time and keep a room warm with but little attention.

In Holland, where the working people are often at home for a little while at noon, they have the most thrifty arrangement of all—what might be called a portable stove, a stove in an iron bucket. When the children come home from school and the older people from work at noon, instead of lighting the kitchen fire, one of the children takes the fire bucket and trots around the corner to the firewoman's. The bucket is just large enough to hold a piece of burning peat or some live coals, and a teakettle sits on top. The old woman who sells fire and hot water fills the bucket and kettle for a tiny sum, and the child goes home with just fire and water enough for the family dinner.

Charcoal is commonly used for cooking in France, Italy and Spain, because it makes a small, hot fire. The Italian keeps warm (or says he does) over a small fire of what we would call an earthen hand-warmer with coals on it, called scaldino. Only within the last few years has it been possible to find rooms that were heated on the American plan anywhere in Europe. The people keep warmer in this country than in any other spot on the surface of the globe in the temperate or frigid zone.

STOVE POLISH FILLS MANY NEEDS.

Black Silk Stove Polish has been made by the Black Silk Stove Polish Works of Sterling, Illinois, since 1883. This polish will not dry out, rust through the cans, or freeze in any climate. The Company states that if Black Silk Stove Polish is used on rims, tires



Black Silk Stove Polish, Made by Black Silk Stove Polish Works, Sterling, Illinois.

will not be injured in taking off. It is also said to prevent auto castings from rusting on the rims. The polish is made of high grade graphite and oils, and is ready to use just as it comes. When a company has been making stove polish for so many years and it has proved to be in great demand, that is strong evidence of its efficiency. Stoves on the dealer's sample floor that have been polished with Black Silk Stove Polish and become shop worn only require going over with a dampened polishing brush. No more polish is necessary and this is said to produce a better shine than when first polished. Each time brings an improvement. Dealers should address the Black Silk Stove Polish Works, Sterling, Illinois, for literature of its various products.

BUY THINGS WORTH WHILE.

Trivial things, or articles you don't need, are sheer waste; waste of your money; waste of material; waste of labor.

Make 1919 a year of thrift. Rational buying means national economy. The best kind of patriotism is to buy carefully; buy only what you need; create a reserve fund—a Savings Stamp fund.

THE WEEK'S HARDWARE RECORD

Of Interest to Manufacturer, Jobber and Retailer

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing western hardware and metal prices corrected weekly. You will find these on pages 40 to 45 inclusive.

EXPERTS FORMULATE SET OF RULES FOR COSTS AND PROFITS.

In spite of the immense amount of study bestowed upon the subject of overhead expenses in relation to net income, there is still much confusion concerning this highly important aspect of merchandising. Hence, it is worth while to reproduce herewith the set of rules for finding costs and profits, formulated by the Retail Credit Men's National Association:

1. Charge interest on the net amount of your total investment at the beginning of your business year, exclusive of real estate.
2. Charge rental on real estate or buildings owned by you and used in your business at a rate equal to that which you would receive if renting or leasing it to others.
3. Charge in addition to what you pay for hired help an amount equal to what your services would be worth to others; also treat in like manner the services of any member of your family employed in the business not on the regular pay roll.
4. Charge depreciation on all goods carried over on which you may have to make a less price because of the change in style, damage, or any other cause.
5. Charge depreciation on buildings, tools, fixtures, or anything else suffering from age or wear and tear.
6. Charge amounts donated or subscriptions paid.
7. Charge all fixed expense, such as taxes, insurance, water, lights, fuel, etc.
8. Charge all incidental expenses, such as drayage, postage, office supplies, delivery expense of horses and wagons, telegrams and telephones, advertising, canvassing, etc.
9. Charge losses of every character, including goods stolen or sent out and not charged, allowance made customers, all debts, etc.
10. Charge collection expense not enumerated above.
12. When you have ascertained what the sum of all the foregoing items amounts to, prove it by your books, and you will have your total expense for the year; divide this figure by the total of your sales, and it will show you the per cent which it has cost you to do business.
13. Take this per cent and deduct it from the price of any article you have sold, then subtract from the remainder and what it cost you (invoice price and freight), and the result will show your net profit or loss on the article.
14. Go over the selling prices of the various articles

you handle and see where you stand as to profits, then get busy in putting your selling figures on a profitable basis, and talk it over with your competitor as well.

DECLARES CONFIDENCE IS GROWING.

A comprehensive report on the business situation, prepared for the Chamber of Commerce of the United States by Archer Wall Douglas of St. Louis, Chairman of its Committee on Statistics and Standards, given out today by the Chamber, gives an encouraging view of present conditions and a hopeful outlook for the future.

The review sums up the general situation, covers in detail the major industries, and goes into finances, prices, transportation and crops. A digest of the report declares confidence in the future is growing.

"It is still one of the wonders of the time," it says, "that the present volume of business continues so large. Though it is perfectly obvious that it is slackening in some lines as always during the two months before harvest when buying waits upon the outcome of the crops. Some manufacturing lines are reducing the number of employes because of falling off in orders and others are out seeking business as they have been doing for several years.

"We shall soon be squarely up against the old proposition that the domestic demands for replacement and repair alone, in default of the activities of construction and development enterprises, are not within themselves sufficient to keep fully employed all the productive possibilities of the country. We especially find this is true of the lack of building in its widespread ramification and demands, though undoubtedly greater activity is apparent in the near future in construction enterprises.

"Confidence in the future is growing as is evinced in the campaign for sales of fall and winter goods now being waged by distributing interests.

"Two factors dominate the future, one the crops, with the prospects of the very best, particularly as regards winter wheat, the other the European situation which puzzles and perplexes from day to day.

"Building and construction are the best barometers of the nature and extent of general business because in their operations they call upon the production of every line of industry for the completion of their activities. It is peculiarly significant, therefore, at present that the general volume of business should be so large when building and construction are at so low an ebb. Such activity as exists is sporadic, scattered, and altogether local. Speculative building practically does not exist and public buildings so far are few.

"There is some construction of homes and farm buildings in small towns and on farms but it is neither general nor exclusive. The reason for this quietude

seems to be the high prices of labor and materials. Materials have declined somewhat but apparently not enough to incite general activity. Apparently we are up against a deadlock but fortunately its solution does not depend so much upon logic as upon human nature. In the past it was axiomatic that building booms do not start from high levels of prices, also that they are the product and result of a long period of prosperity, because they depend upon an accumulation of funds which seeks investment in real estate. Some of this is speculative but much, that of building homes, rather is indulgence of a sentiment than an investment.

"In general, building activity is the last thing to start going in eras of prosperity and likewise the last thing to stop. We are distinctly at the end of one period of prosperity, so logically, if we are to have another era of much building, it should wait until our era of prosperity is well on the way.

"The revival of building may come from an entire change in our point of view. We may realize that the cost must be considered not an actual but as a proportional matter, and as in relation to our purchasing power rather than the actual labor and material costs. If salaries and wages maintain their level and the cost of necessities decline then our ability to build may be as great as ever.

"Meanwhile, the outlook is distinctly better and the expectation is for an increase, during the next four months, of from fifteen to twenty per cent in the volume of building compared with the same period last year and for much greater activity next fall should business be good—for it all depends upon that."

NOW IS THE TIME TO BUY FREEZERS.

In the accompanying illustration is shown the Blizzard Freezer, one of the many different brands made by the North Brothers Manufacturing Company of Philadelphia, Pennsylvania. This freezer insures automatic, positive, and continuous scraping of the frozen cream from the side of the can as it possesses automatic twin scrapers. The scrapers are hung on



Blizzard Freezer,
Made by the North
Brothers Manufacturing
Company,
Philadelphia,
Pennsylvania.

the dasher so their lower ends rest on the bottom of the can and the friction between the ends of the scrapers and can bottom moves the scrapers against the side of the can and holds them there continuously. The Company has patented this device.

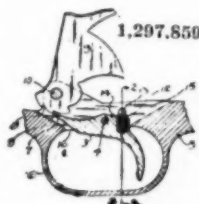
The cans have drawn steel bottoms which are said not to break or fall out of the body of the can.

The body is made of durable tin plate and the top is strongly wired and turned over. The pails are of pine with electric welded wire hoops guaranteed not to fall off or break. The gears are well covered so that neither salt nor ice can get in the cogs and the fingers cannot get caught. All inside parts in contact with the cream are heavily coated with pure block tin and the outside parts are smoothly and heavily galvanized. The ice space is arranged so that the least possible amount of ice and salt are used. Further details may

be secured by writing to the North Brothers Manufacturing Company, Philadelphia, Pennsylvania.

IS GRANTED PATENT FOR A TRIGGER MECHANISM FOR FIREARM.

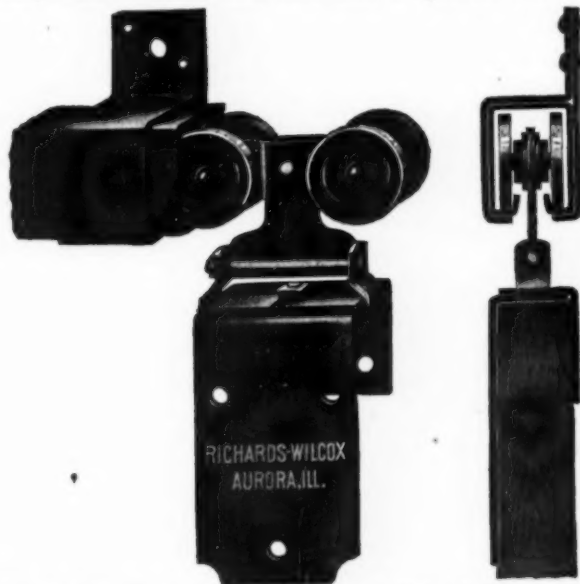
Thomas C. Johnson, New Haven, Connecticut, assignor to the Winchester Repeating Arms Company, New Haven, Connecticut, has obtained United States patent rights, under number 1,297,859, for a trigger mechanism for firearms, described herewith:



In a firearm, a trigger formed at the rear of its pivot with an upwardly opening hole leading into a semi-circular transverse trigger-stop recess, a helical trigger-spring located in said hole, and a transversely arranged stop-pin mounted in the gun and extending above the trigger in position to form an abutment for the upper end of said spring and to co-act with the said transverse trigger-stop recess to limit the upward movement of the rear end of the trigger.

MAKES DEPENDABLE DOOR HANGERS.

The products of the Richards-Wilcox Manufacturing Company of Aurora, Illinois, are known throughout the trade for their durability, efficiency, and reliability. These are just the characteristics which the dealer looks for; consequently the articles made by this Company are widely bought. In the accompanying illustration is shown one of its door hangers. This hanger is finished in black enamel or galvanized with a lateral adjustment only. The wheels are of grey iron, lathe turned, and two and a quarter inches in



Richards-Wilcox Door Hanger, Made by Richards-Wilcox Manufacturing Company, Aurora, Illinois.

diameter. The apron is six inches long, hinged, three and a half inches wide, one-eighth inch thick and punched for five-sixteenths inch bolts. These hangers are made for doors one and three-quarters to two and a half inches thick. These door hangers are easily operated and are only one type of the many kinds made by this Company. Dealers should write to the Richards-Wilcox Manufacturing Company, Aurora, Illinois, for further particulars and a copy of their catalog.

PRINCIPLES AND EXAMPLES OF GOOD WINDOW DISPLAYS.

ARRANGES GAINFUL WINDOW DISPLAY OF HUNTING AND CAMPING GOODS.

That a window display of hunting and camping goods offers many opportunities for the introduction of novel and striking effects is amply demonstrated by the clever exhibit shown in the accompanying picture, arranged by the F. R. Chown Hardware Company, Portland, Oregon. Even the man who has never forsaken the crowded streets of the city for the quiet paths of the forest will feel the call of the wild in the intensely realistic appeal of this display. Its effect upon the man who has known the joys of the hunt and the allurements of the woods is direct and powerful. It turns his fancies back to other days and, often, is the deciding influence in causing him to plan another trip in the near future. Naturally, then, he runs over in his memory the present condition of his equipment and resolves to supply without delay any deficiency which may occur to him. He enters the store for further inspection of the hunting and camping goods suggested by the display and buys or makes arrangements to buy such guns, ammunition, and camp accessories as he may need to bring his outfit up to date.

It takes work to put together such a window display as this of the F. R. Chown Hardware Company. However, the amount of work can be considerably lessened by intelligent planning of the details in advance of their actual disposal. The window trimmer who studies the principles of the art will not be satisfied slavishly to follow the design of others. He will, whenever possible, strive to make his display fit the requirements of the store's trade. Every locality has its own particular hunting pastime which is preferred above all others. In some places the sportsmen are big game hunters; in others they go after the ducks; and so on. Logically, then, it pays to appeal to local preferences and devise the window display accordingly.

Thus, a window trimmer in a town close to which are a number of extensive duck-frequented marshes, instead of a scene in the Northern woods showed the edge of a marsh, with a punt, and poles in place, reeds and rushes growing, a few decoy ducks, some in the



Window Display of Hunting and Camping Goods, Arranged by the F. R. Chown Hardware Company, Portland, Oregon.

water and some in the punt, and a half concealed hunter, completely equipped with boots and waterproofs, taking aim with his trusty weapon at a flock of imaginary ducks somewhere on the horizon. Incidentally, in the punt was shown a full line of ammunition and other accessories. In this instance the water was purely imaginary, the floor of the window being covered with a greenish gray cloth, which showed here and there through the roots of the genuine rushes. Although it would take more work, real water could be shown, and the actual marsh duplicated in almost every detail. What can be done in window trimming, in the way of realistic effects, is limited only by the amount of time and trouble the trimmer is willing to give to the display.

The trimmer will find it profitable to be a mixer. Usually, the proprietor himself maps out the trim, at least in small town stores; in some instances the task is entrusted to the clerk who has special charge of the sporting goods and hunting goods department. Naturally, that trimmer is well equipped for his task who knows by actual experience the marsh and the woods. He is able to introduce into his display many little incidentals which appeal by their very realism, and

which the trimmer without actual experience of hunting will rarely chance upon.

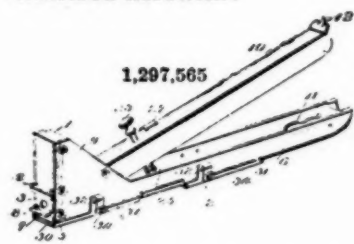
However, at the height of the hunting season the average window trimmer is too busy to take a back-to-nature holiday. For his information he must rely largely upon customers. It is worth while therefore, to mix with these customers, and not merely to sell them hunting goods, but to listen to hunting stories and to learn the subject thoroughly. As with all lines of sporting goods, the successful hunting goods seller, advertiser and window trimmer is the man who gets into the game, if not actually, at least in the sense of understanding all its details and being an enthusiast. The clerk who takes an interest in such things, who listens to the often tall yarns of the enthusiastic hunters, who understands all about ammunition and weapons and camp incidentals, is laying a mighty good foundation to the successful handling of these lines.

Various items enter into such displays. The tent is usually part of the hardware stock. For a duck shooting window, a punt can easily be secured. Often a tent is replaced by a miniature log shack or hut, which can be constructed of the slender boughs of trees. Stuffed animals can be secured from the local taxidermist, who is often glad thus to advertise his work; live animals—such as rabbits—can easily be procured. Some duck hunters now raise live decoys; these make an effective window feature. Leaves, boughs, reeds and other items are necessary for effective background.

It is worth while remembering always that no display is effective which does not aim to produce sales. The hunting scene itself serves to attract attention; but it ought to be linked up with the goods in order that the attention thus secured may have a chance to induce actual purchasing of guns and hunting accessories. Therefore, the ideal window is that which, while creating the most striking scenic effect, at the same time introduces as many hunting accessories as possible without blurring the general effect of realism. This desirable result is achieved by the F. R. Chown Hardware Company in the display shown herewith, which proved its value in a notable increase of sales.

SECURES PATENT FOR A SAW SETTING AND FILING TOOL.

Henry Hilton, Victoria, British Columbia, Canada, has been granted United States patent rights, under number 1,297,565, for a saw setting and filing tool, described herewith:



A tool for the purpose set forth comprising a body having an opening therethrough and provided upon its outer face with a rest immediately below the said opening, a saw tooth retainer upon the body above the opening, a setting pin slidably mounted in the opening, a handle member projecting from the body, and a setting lever fulcrumed upon the handle and provided with a setting head bearing upon the setting pin.

SPECIAL WORKSHOP HELPS WINDOW TRIMMER GET BETTER RESULTS.

The workshop is an almost absolute necessity to produce window displays properly. The amount of space required and equipment is soon paid for in the amount of time saved, and the higher class workmanship that can be gained by so having. With a workshop or room, better work can be done in every important feature concerning our displays. It affords an ideal place for designing, away from all interruptions which are sure to occur under other conditions. It affords a place for construction of frames and all sectional parts, keeping them from the inquisitive and curious until you have finished your display, and affords protection from the dust, dirt and handling of such delicate pieces that are constructed and painted from time to time; also affords a place for keeping your paints and all necessary materials for your work, as well as a place of storage for "set pieces" and parts which you wish to keep and work over with new parts added in some future display.

Your room should be just as large as you can possibly make it, owing to conditions and how much space you can spare, but wherever it is located it must have plenty of light and equipped with electric lights. You should also have a door to the room and a sign on the outside reading, "Private," and by all means have the room as near dust-proof as possible; have a place for everything and everything in its place; always keep your room locked and carry your key. Never allow your window trimming room to be used by others for various kinds of work; it is maintained for the benefit of the show windows, therefore keep it for that purpose, and so systemized that it will do its important duty properly to the best interest of your displays.

One section of your room should have a large drawing table, or a smooth flat-top desk, to be used in designing; empty shell cases with partitions made into them and fastened on one side of the wall, offers you innumerable pigeon holes for memorandums, sketches, etc. Your table can be constructed roughly, yet firmly, with two by four lumber for legs and one by twelve boards for top, then cover the top with straw cardboard of good weight, giving you a perfectly smooth surface to work upon; directly beneath should be a rack in which you should keep a supply of full sheets of plain white paper, or better still drawing paper. In a drawer (on which is a lock and key) you should keep your drawing outfit used in making your sketches and innumerable other things, a good supply of thumb tacks and all things that you use most frequently while sketching or designing should be convenient to this table or desk, as the case might be.

Another portion of your shop should be your carpenter work bench with your tools kept in the cabinets directly over it. You will find that empty boxes such as are used for shipping hardware, are good. Put the top on hinges, lock with a hinge, hasp and padlock; drive nails inside on which to hang your saws, hammers, etc., making sockets of strips of leather or tin in which to keep screwdrivers, chisels, awls, etc. With these boxes arranged directly above your work bench

or to one side on the wall everything is conveniently located, and where you want it, and make it a positive rule to loan your tools to no one; do not take them out of your shop, only those that are absolutely necessary. Make you a smaller hand tool box to be used while working in the window, keeping in it the tools used most frequently while in the window. Have plenty of small partitions for tacks, brads, wire, screws, nails, paper of pins, etc. A little drawer for small paint brushes will be found helpful. Always have a pair of shears in this box, a rule, nail hammer, tack hammer, plenty of screw hooks, screw eyes and tacks. Have a lock for this box, and when you leave work temporarily, leave your box locked with the tools inside; have a good strong handle on the box by which you can carry it easily from the window to the work shop.

Another section of your workroom should contain a large cupboard, made dust-proof, if possible. This should be arranged with shelves and partitions large and roomy. In this cupboard keep your canvas, draperies, ribbons, flags, bunting and dry goods. The bottom section you could use to good advantage for your stock of cardboard, providing you haven't sufficient space to permit of a regular cardboard rack.

Still another section should contain your painting department. A square table covered with a piece of zinc affords a nice place for mixing and preparing your colors, etc.; directly above a tier of shelves on which should be kept your paints, labels all out, convenient to reach. The bottom shelf should be somewhat wider than the ones above and project over the back edge of your table. On this shelf keep your tin cups, pans, cases, etc., in which to mix your paints. When through always keep them clean and dry, ready for instant use. Hanging from one corner of this table should be kept a long piece of cheese cloth, to serve as a wiper for your brushes; underneath this table keep your brushes in water when not in use or else thoroughly cleaned and slightly greased before putting them into a drawer with a good lock on it. Maintain your rule of "a place for everything and everything in its place." Keep a good supply of tacks, nails, brads, screw hooks, screw eyes, screws, wire, glue, corrugated fasteners, etc., always in the shop.

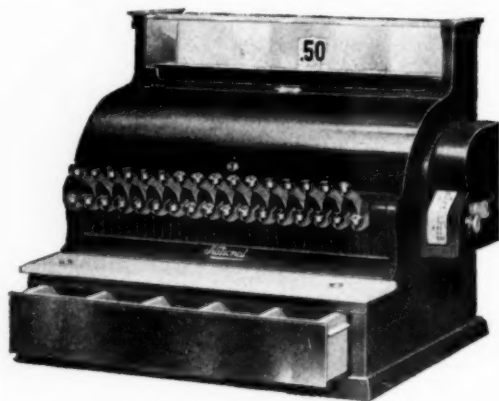
If you are crowded for space (and such is usually the case) yet have a good high ceiling, it would be well to erect you a gallery, where all "set pieces," scrolls, pillars or other pieces you wish to keep in good order for future use could be properly kept and out of the way. When you wish to preserve a piece of finished work after having used it once in the window, and intend to work it over again, before putting away wrap it with paper to keep dust from damaging.

For the painting of large pieces of canvas to be used in a coming display, your shop might not afford sufficient wall space on which to first tack this and prepare it for the window. Should this be the case, you surely have as much as half the size. Therefore erect you a frame work projecting from the wall, with perpendicular pieces on each end with a horizontal strip at the top and bottom; tack your canvas on this, leaving the tacks partly driven in and if not possible to reach both sides paint one half at a time, allowing the finished half to hang on the back side.

It is of just as much importance that the proper care, attention and interest be given the place in which the work of creating displays that increase and make business for a firm, as it is to have a properly equipped, well arranged and perfectly systematized office, to care for the business that has already been gotten and no broad-minded, progressive hardware merchant will think of handicapping the department that creates the business by not making the proper arrangements for a place where the work can be done, with the proper tools, and in the proper manner. Many merchants spend thousands of dollars in maintaining the latest and most improved methods, etc., for office work, yet frown at the mere suggestion of something pertaining to the improvement of that valuable department, the department that "gets more business." Office work and equipment are actual expenses caring for and handling the business already in hand, but your displays are investments on which you realize returns and seek further business, therefore why should not the window trimmer's work-shop be constructed in the best possible manner, to enable him to execute the work with a view to obtaining the best possible results.

MACHINE PAYS FOR ITSELF.

In the accompanying illustration is shown a National Cash Register, manufactured by The National



National Cash Register, Made by National Cash Register Company, Dayton, Ohio.

Cash Register Company of Dayton, Ohio. The Company claims that the machine pays for itself out of what it saves. It cuts down clerical work and saves delivery and clerical supplies. A National Cash Register gives complete information about the day's business just as soon as it is wanted. A glance will show: 1. Total amount of merchandise sold. 2. Total cash received for goods. 3. Amount of your charge sales. 4. Detailed record of cash received on account. 5. Detailed record of cash paid out. 6. Amount of each clerk's sales. 7. Number of customers each clerk waited on. 8. Total number of transactions made during the day. All these figures are absolutely accurate and reliable because they have been recorded by modern machinery. The National Cash Register Company, Dayton, Ohio, has offices in all the principal cities of the world, and dealers should take advantage of the benefits that a cash register gives by writing to this Company for its literature and particulars.

Pay what you owe and you will know what you have.

PROVES ADVANTAGES OF COOPERATION BETWEEN EMPLOYERS AND WORKERS.

The Associated Industries of Massachusetts has obtained a number of interesting reports on plant management. In a recent issue of its association bulletin, "Industry," it tells what the Greenfield Tap and Die Corporation of Greenfield, Massachusetts, is doing to win the cooperation and friendship of its employees. Its system of benefit, health and sanitation, safety, educational and social activities has proved itself of great value to both employers and employees.

At the plant of the Greenfield Tap and Die Corporation, Greenfield, Massachusetts, is a force of 1,800 employees whose efficiency has been developed to a high degree by a system of treatment based upon a recognition of the simple fact that workers are human beings and not machines.

This concern looks upon it as not only a duty, but as a real business advantage, to improve the conditions under which its men work. The head of one of the departments, who is always looking for ways and means to improve efficiency and morale, put the corporation's view of the case in these words:

"The employer who thinks of his men as so many machines to be worked to the limit is not only a violator of human rights and justice, but he has failed to appreciate the value of friendship, cooperation and loyalty of the worker as the principal factor in industrial success.

"It is therefore of vital interest to industry to foster every betterment agency that tends to increase efficiency and strengthen the character and morale of its working force."

Industrial Betterment Work.

The service work, or as it is called there, the industrial betterment work of the Greenfield Tap and Die Corporation is carried out under an industrial betterment committee, the personnel of which includes the head of the industrial relations department, the assistant superintendent, the supervisor of educational work, the paymaster, the employment supervisor and one of the mechanical foremen.

The committee meets every two weeks, when reports of activities are read and suggestions for improvements discussed and acted upon.

The betterment work is classed under four heads: Benefit activities, health and sanitation, educational, social and general.

No effort is spared by the corporation to keep its plants in a clean and sanitary condition.

Its factories are inspected every week by a member of the industrial betterment committee. It maintains modern toilet facilities, wash rooms and lockers. Drinking fountains, containing cooled water, are located at easily accessible places.

The buildings are of the one-floor, semi-saw-tooth construction, allowing plenty of air and light.

General Health and Sanitation.

What is regarded as the most important work in connection with the conservation of health at these plants—there are six separate plants controlled and managed by the corporation—is the employment of a trained industrial nurse.

The duty of this nurse is to supervise the first aid and emergency rooms, visit the sick and exercise a general supervision over the health of the employees and the sanitation of the rooms in which they work.

At each of the main plants there is maintained a fully equipped hospital room where minor accidents are treated by the nurse or her assistant. In the absence of the nurse a competent assistant is always in attendance.

Serious accidents are given first aid. The injured person is then carried immediately by automobile to the hospital or to the office of the corporation physician.

Medical Care and Accident Prevention.

The corporation does not employ a physician full time, but has one in attendance two or three hours a day. There is, therefore, no physical examination of workers preliminary to employment.

The services of the Life Extension Institute of New York are employed, however, for periodical examination of executives, foremen and employees of the factory who wish to avail themselves of such health measures.

In this way through the services of the institute doctors, at a very small cost, the corporation is able to ascertain whether the health of the workman is sufficiently good to enable him to handle the job assigned.

All up-to-date methods of accident prevention are employed by this corporation. There is a monthly inspection of machines to see that all are properly safeguarded, and the plants are constantly watched to see that no unavoidable danger-places exist.

As a further precaution against accidents, the bulletins from the National Safety Council are posted in a conspicuous place in each plant each week, and in this and other ways an effort is made to secure the cooperation of the employees in keeping the accident record as low as possible.

Helpful Benefit Activities.

There is an Employees' Benefit Association, conducted by and for the employees. The corporation acts only in a consulting and advisory capacity.

Ninety per cent of the employees of the corporation belong to this association. It pays a sick benefit of \$7 a week for twelve weeks, and a death benefit of \$100.

Employees are assessed 50 cents about four times a year. In 1917 only three assessments were required. The corporation contributes about 15 per cent of all expenses, including sick and death payments.

The most active and best appreciated benefit organization at these plants is the Junior and Old Guard Association.

When an employe has been with the corporation five years continuously, he automatically becomes a member of this organization and is a participant in its benefits.

As soon as a man is entitled to membership he is given a solid gold pin, which is the emblem of the organization, and which he wears with pride as a token of his length of service and loyalty to the corporation. He is also given a \$500 life insurance policy which is maintained entirely by the corporation, and remains in effect as long as the workman is in its employ.

Each five-year man receives each Christmas from the corporation a check for \$3, until he has reached his tenth year of continuous employment, when he automatically becomes a member of the Old Guard.

The Old Guard bonus is \$3 for each year over ten years. The oldest employe of the corporation received last Christmas a check for \$108, showing that he had been continuously in its employ for forty-six years.

At the annual meeting of the Junior and Old Guard organization, which is held at Christmas time, the president of the corporation presents the checks and welcomes the new members. There is usually an address by some prominent speaker, and music and refreshments are provided.

Last year the corporation paid out \$3,904 in bonus checks. The association has now 249 members.

Educational Work Quite Popular.

In the winter of 1916-17 the corporation started classes in shop sketching and shop arithmetic under the leadership of a competent instructor operating with the state university extension institute.

These classes proved successful from the start, and are being continued. They are popular with the men, who find that a knowledge of shop mathematics and shop sketching assists them materially in increasing their value to the corporation and places them in line for promotion which they otherwise might not attain.

In 1916 the corporation established an apprentice school providing instruction in the machinist's and toolmaker's trades for boys under twenty-one years of age.

The room set apart for this purpose occupies a space of 40 feet by 60 feet, and is equipped with all necessary machines and tools.

Adjoining the machine room is a class room equipped with drawing tables, instruments and blackboards, where once a week the boys study the theory of mechanical practice, including shop sketching and shop arithmetic.

The class started with six boys and has steadily grown, so that the corporation is planning for an increased capacity.

Great care is exercised in choosing boys for this course. The boy must have the hearty cooperation and support of his parents, and must have in him a natural mechanical inclination and the desire to make good in the tool making trade. He must also have at least the equivalent of a grammar school education, and he must be physically fit and of average ability and good character.

The apprentice is paid 14 cents an hour at the start, and receives 1 cent per hour additional for each successive term, until at the close of the course he is receiving 25 cents per hour. He also receives a bonus ranging from 5 per cent to 20 per cent, depending on the quality of his work and his general efficiency. In addition, all the boys receive a 5 per cent bonus each week for perfect attendance, and at the completion of the course the company pays the boy a bonus of \$100 in cash and a set of tools complete enough to meet his requirements as a tool-maker, at a cost not less than \$60.

During the war the corporation started a short-term school for women employes, with a view to fa-

miliarizing applicants for positions with the general productive work of the factories.

All new women employes first enter this school or training room and are given not less than two weeks' instruction in the various operations which they may later be called upon to perform.

If there is not an urgent need for help in the plants, the course is extended, the time varying with the capacity of the employe.

The women at this school perform the regular operations of the factory, and because of this the school has paid from the start and has met with the approval of the works manager and the foreman because of the increased efficiency of the help. It has, furthermore, had a decided tendency to reduce labor turnover among this class of employes.

Comprehensive Restaurant Service.

The corporation maintains a complete dining room system where meals are furnished to employes at cost. This service was started in a small way, being confined at first to supplying hot frankfurters and coffee. This proved so popular with the employes that the service was extended, until now there is an annual income from it amounting to about \$30,000.

This covers merely the cost of food. It does not include overhead. That comes back to the company in increased efficiency due to the employes' appreciation of this kind of service.

There are three dining rooms, with one central kitchen, where all the cooking is done. This kitchen is equipped in the most modern way. The system is run on the cafeteria, or self-service plan. In this way 150 employes can be served in 15 minutes easily. On this plan a man can get a good meal for from 20 to 30 cents. If he is very hungry and very extravagant, he may spend as much as 50 cents.

The dining rooms are furnished with white-topped tables, each capable of seating eight, with smaller tables and easy chairs near the windows. There is a piano for the use of employes during the rest periods, and newspapers and magazines are provided. There is also a counter for the sale of cigars, tobacco, and confections.

Social and General Activities.

The corporation has encouraged the planting of war gardens by supplying land, ploughed and harrowed, free to all employes who applied. Last year there were 304 gardens, covering thirty-eight acres. This venture, started in 1917, has proved so successful that the corporation plans to make it a regular feature of the betterment work of the plants.

Every effort is made to encourage interest in sports. Uniforms are purchased for the baseball team, and any deficit which may exist as a result of the maintenance of a schedule of games is paid by the corporation.

Unusual expenses in connection with social activities are always paid by the corporation, which encourages socials and dances as a means of promoting esprit de corps. A small admission fee to such affairs is usually charged by the employes, the proceeds going to the G. T. D. Benefit Association.

The corporation solicits suggestions from employes, and suggestion boxes are installed throughout the

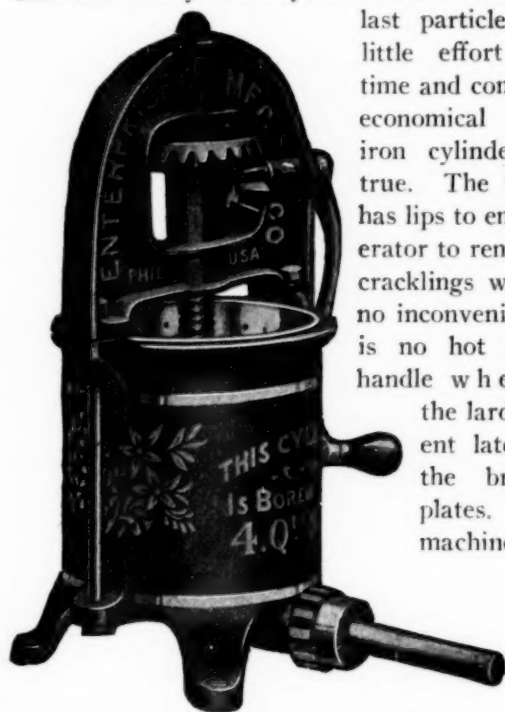
plants. For such suggestions rewards ranging from \$5 to \$100 are offered.

The corporation owns seventy apartments which are rented to the employes at a figure sufficient to cover reasonable interest charges. These apartments are modern in every respect, and the surroundings are made attractive by carefully kept lawns and shrubbery.

There is a board and room register at the plants, and every new employe is assisted in finding pleasant rooms and good board at reasonable rates. In this way he is protected against exploitation at the hands of greedy landlords.

HAS PATENTED CORRUGATED SPOUT.

In the accompanying illustration is shown the Enterprise Lard and Fruit Press and Sausage Stuffer. This commodity is always seasonable. It extracts the



Enterprise Lard and Fruit Press and Sausage Stuffer, Made by The Enterprise Manufacturing Company of Pennsylvania, Philadelphia.

last particle with very little effort and little time and consequently is economical also. The iron cylinder is bored true. The tin cylinder has lips to enable the operator to remove the hot cracklings with little or no inconvenience. There is no hot cylinder to handle when pressing the lard. The patent latch prevents the breakage of plates. With each machine is furnished a new patented corrugated spout which prevents the air from entering the casing and in this way assures the preservation of the sausage. The spout has a three-quarters inch outlet. At a small cost, other sizes such as three-eighths inch, one-half inch and five-eighths can be supplied. This Enterprise Lard and Fruit Press and Sausage Stuffer can be had either japanned or tinned in various sizes. For further details and copy of the Company's catalog and price lists, dealers should address The Enterprise Manufacturing Company of Pennsylvania, Philadelphia, Pennsylvania, or its branch offices at 29 Murray Street, New York City, and 77 O'Farrell Street, San Francisco, California.

EUROPEAN GRASS SCYTHES.

To AMERICAN ARTISAN AND HARDWARE RECORD:

Kindly advise where I can get European Grass Scythes.

SUBSCRIBER.

—, Illinois, April 24, 1919.

ARE SOLD IN MARKETS OF EVERY LAND.

The Automatic Screw Machine products manufactured by the Corbin Screw Corporation (The American Hardware Corporation, Successor), New Britain, Connecticut, two of which are illustrated herewith, are universally used and recognized throughout the world. It is declared by the Company that these products have been used by various concerns in all parts of the earth for many generations and that they have long been known for their high quality and un-failing efficiency. It stands to reason that it is a very



Automatic Screw Machine Products, made by the Corbin Screw Corporation, New Britain, Connecticut.

difficult task for a concern to have its products introduced and used so widely, and it goes without saying that the products must be as nearly perfect as it is possible to make them and the service rendered by the manufacturers must be completely dependable. World-wide fame is not a matter of weeks, or even months, but is a matter of years. Consequently, the Corbin Screw Corporation has applied itself to the task and worked hard to bring its products up to their present day perfection of material and workmanship. Full information regarding the automatic screw machine products and the many other articles manufactured by the company may be obtained by Britain, Connecticut.

IT PAYS TO EXCHANGE KNOWLEDGE.

If you have the mistaken idea that by keeping all your knowledge and ideas to yourself you are so much better off than the other fellow, the sooner you get rid of that idea the better.

The idea that giving away knowledge makes a man poorer, and that withholding it makes a man richer, is a mistaken idea.

In the early days of automobiling, the driver sometimes found out some little thing that enabled him to speed up a little or to get a mile or two more out of his gasoline. At first, he kept his knowledge to himself, but later on, when he became more sociable with his fellow drivers, he learned they had some little "kink" that was helpful in driving and then it was found that in exchanging ideas they were better off; none was the poorer.

Executives should encourage their superintendents to associate with other superintendents and to exchange information. They will be none the poorer because there is some person who knows just as much as they do and it is not going to cut the ground from under their feet because they helped some other fellow or exchanged information.

OPPORTUNITIES FOR FOREIGN TRADE PRESENTED BY BUREAU OF FOREIGN AND DOMESTIC COMMERCE.

The Bureau of Foreign and Domestic Commerce through its Special Agents, Consular Officers and Commercial Attachés is receiving information of op-

portunities to sell hardware and kindred lines in several foreign countries. Names and locations will be supplied on request to the Bureau in Washington or its District Offices. Such requests should be made on separate sheets for each opportunity, stating the number as given herewith:

29065.—A company in Spain desires to purchase flatware, such as silver and silver-plated spoons, knives, and forks; and small firearms, razors, razor blades, and barbers' supplies. Quotations should be given f.o.b. New York. Terms, cash to be paid against documents. Correspondence should be in Spanish. Reference.

29070.—A man in Belgium desires to secure an agency from manufacturers for the sale of rustless and other cutlery. Terms, payments to be in cash. Correspondence may be in English.

29073.—A man in India desires to purchase and secure an agency for the sale of cutlery, enamel ware, plate and glass ware, ironware, etc. Packing must be the best available, and cases be bound with hoop iron. References.

29079.—A firm in Spain desires to purchase building hardware, heavy hardware, emery stones, and automobile truck tires. Quotations should be f.o.b. New York. Payment, cash against documents. Correspondence should be in Spanish. References.

29083.—A man in Greece desires to purchase galvanized-iron sheets and corrugated-iron sheets, size in meters, two by one thickness; 22 to 28 gauge; and solder used in connection therewith. Quotations should be f.o.b. New York. Correspondence may be in English. References.

29085.—A buyer of a Danish firm in Denmark desires to receive detailed catalogues with a view to placing extensive orders for toys, toy pistols, and novelties. Terms, cash against documents. Correspondence may be in English. References.

29107.—A man in Australia desires to secure agencies for the sale of automobile accessories, novelties of all kinds, especially hotel and household novelties. Reference.

29116.—An agency is desired by a man in France for the sale of goods for manufacturers or industrial firms. He states that he is familiar with France, England, and Belgium, having traveled through these countries. Correspondence may be in English.

29120.—A commercial agent in France desires to secure an agency for the sale of agricultural machinery, hardware, cutlery, etc. Correspondence may be in English. References.

29127.—A firm in Switzerland wishes to purchase any kind of manufactured articles, tools, farming implements, copper, etc. Quotations should be given f. o. b. American ports. Payment, cash against documents. Correspondence may be in English.

29133.—A man from Canada who is soon to sail for England desires to secure an agency for the sale of hardware, household equipment, etc. Reference.

29145.—A man in Norway desires to purchase second-hand motorcycles, automobiles, tools, and typewriters, and new hardware. Payment, through bank in New York. References.

29155.—A company in China wishes to be placed in touch with wholesale dealers in rebuilt automobiles, motorcycles, and motors. It further requests catalogues covering hardware, house-furnishing goods, agricultural implements, and tools.

29157.—A firm in Norway desires to purchase and secure an agency for the sale of heavy hardware, tools, general hardware, etc. Credit to be open in New York through local banks. References.

29161.—A man in Norway wishes to purchase and secure an agency for the sale of hardware, bicycles, cutlery, enameled ware, aluminum goods, bicycle supplies, etc. Payment, cash against documents. Reference.

29165.—A man from England, who is in this country for a short time, desires to secure agencies and to purchase cutlery, etc. Reference.

29168.—A firm in Norway desires to purchase and secure an agency for the sale of plated ware, knives, forks, spoons, etc., hardware, etc. Terms, cash against documents in New York or at destination. Reference.

29170.—A member of a firm in Italy is in this country for the purpose of securing agencies from manufacturers of hardware, bicycles, agricultural implements, paints, etc. Reference.

COMING CONVENTIONS.

Arkansas Retail Hardware Association, Marion Hotel, Little Rock, May 6, 7 and 8, 1919. J. B. Webster, Secretary, Little Rock, Arkansas.

Panhandle Hardware and Implement Association, Amarillo, Texas, May 12, 13, 1919. T. C. Thompson, secretary, Canyon, Texas.

Louisiana Retail Hardware and Implement Association,

Grunewald Hotel, New Orleans, Louisiana, May 12, 13 and 14, 1919. R. D. Nibert, secretary, Bunkie, Louisiana.

Pacific Northwest Hardware and Implement Association, Seattle, Washington, May 14 and 15, 1919. E. E. Lucas, secretary, Hutton Building, Spokane, Washington.

National Association of Stove Manufacturers, Hotel Astor, New York City, May 14 and 15, 1919. R. S. Wood, secretary, National State Bank Building, Troy, New York.

The Hardware Association of the Carolinas, Charlotte, North Carolina, May 20, 21 and 22, 1919. T. W. Dixon, Secretary, Charlotte, North Carolina.

Alabama, Florida and Georgia Retail Hardware Associations, Jacksonville, Florida, May 21, 22 and 23, 1919. Walter Harlan, Secretary, Atlanta, Georgia.

National Sheet Metal Contractors' Association, Columbus, Ohio, June 10, 11, 12 and 13, 1919. Edwin L. Seabrook, Secretary, 261 S. Fourth street, Philadelphia.

The American Society of Heating and Ventilating Engineers, William Penn Hotel, Pittsburgh, Pennsylvania, June 10, 11 and 12, 1919. C. W. Obert, Secretary, 29 West 39th Street, New York City.

National Warm Air Heating and Ventilating Association, Columbus, Ohio, June 11, 1919. Allan Williams, Secretary, Columbus, Ohio.

Sheet Metal Contractors' Association of Ohio, New Southern Hotel, Columbus, Ohio, June 11, 12, and 13, 1919. W. J. Kaiser, Secretary, Columbus, Ohio.

National Retail Hardware Association, William Penn Hotel, Pittsburgh, June 24, 25, 26 and 27, 1919. Herbert P. Sheets, secretary, Argos, Indiana.

Mississippi Retail Hardware and Implement Association, Agricultural College, July 8, 9 and 10, 1919. D. Scoates, Secretary, Agricultural College, Mississippi.

RETAIL HARDWARE DOINGS.

Arkansas.

The Madison County Hardware Company, Huntsville, has been incorporated for \$15,000 by L. M. Riggs, Morgan McMichael and C. G. Boatright.

Bates Brothers Company are putting in a stock of hardware at Fayetteville.

E. L. Cotton has opened a hardware store at Little Rock.

Iowa.

Lee Harbrige has sold his hardware store at Pulaski to George Downing and Son.

Kansas.

The stock of the Mitchell Hardware Store at Morland was burned out.

Minnesota.

A. W. Atwater has bought a hardware store at Williams. Carl T. Strand and Nils F. Frisk have purchased the hardware stock of P. H. Hanson and Company at Lake Park.

Missouri.

M. Derfler has sold his interest in the Clark Hardware Company at Kirksville to James W. Clark.

The McCleod and Company hardware and furniture store at North Salem, which was recently damaged by fire, is re-stocking and will resume business very shortly.

Montana.

J. W. Johnson has sold his hardware store at Hardin to J. W. Bullis.

C. F. Biller has taken over the hardware business of Wolcott and Biller at Clyde Park.

North Dakota.

Adamson and Shulz will open a hardware store at Great Bend.

Oklahoma.

Carlie and Edgar Long have again become owners of the hardware business at Pauls Valley that was sold to J. H. Dukes and Son several months ago.

The Banner Hardware Company, Wilson, has been incorporated for \$10,000 by P. W. McKay, Walter Hodges and Nancy A. Moore.

South Dakota.

Heilman and Brown have sold their hardware store at Miller to W. L. Schroeder and Walter Carr.

E. A. Amburn has bought C. S. Griffith's interest in the Pixley and Griffith hardware business at Montrose.

Texas.

J. S. Stockard has sold his hardware store at Cisco to Wende and Richardson.

Allen and Strickland have succeeded Vaughn and Oliver in the hardware business at DePort.

Wisconsin.

Huebner and Naze of Bear Creek have bought the New London Hardware Company's stock at New London.

Johnson and Reiss will open a hardware store at Jefferson.

John Obermayer has sold his hardware business at Florence to Garfield H. Wildman and Earl E. Marsh.

Ed Gottschalk will open a hardware store at Deerfield. W. G. Wert has sold his hardware business at Boardman to Will Tobin of Burkhardt.

AUTOMOBILE ACCESSORIES SOLD BY HARDWARE DEALERS

ADVISES USE OF GOOD PISTON RINGS.

There is considerable advantage in using a good make of patented piston ring over the plain type. In the first place, most of the patented rings are concentric, whereas the others are eccentric and do not bear on the cylinder walls as well. Also, the joint in the patented rings is usually superior to that in the common slant cut or step ring. Before fitting patented rings, however, care should be taken to see that the cylinders are not out of round or badly scored. The best rings in the world would not help then, unless the cylinders were reground.

GOOD ROADS INCREASE BUSINESS.

Twenty years ago the market limit of the average city was about 10 miles. It was no farther removed from the heart of the town—courthouse square, if you please—than it was possible for a team to pull a loaded wagon on a dirt road and make the round trip between the morning and evening chores. Much is said these days about "seasonable employment," meaning such work as must be done in certain favorable seasons of the year. Seasonable employment is another term for periodic idleness. It will be eliminated in a 100 per cent efficient industrial system. The mud road makes "seasonable business" which means that periodically there is practically no business because roads are impassable. A 100 per cent efficient business system will eliminate periodic suspensions of business activities, even if to do so means the construction of hard-surface roads.

The Division of Public Works and Construction Developments in the United States Department of Labor has been investigating the effects of good roads and motor trucks on marketing conditions and the increase of business in commercial centers. The results of this investigation can be summarized in a statement of the situation in one city, Indianapolis, Indiana. The shopping district of Indianapolis is a circle the diameter of which is approximately 200 miles. Three instrumentalities make this possible—interurban lines, roads which are open to travel the year around and automobile trucks.

LET YOUR MONEY GROW FOR YOU.

If there were two kinds of United States money, one just ordinary money, and the other, money that increases in value every month, you'd naturally want the growing kind—all you could get hold of. You'd change as much of your money as you could for the growing kind of money that got bigger right along. You'd hold on to the growing kind and let it grow for you.

There are two kinds of money—ordinary dollars and quarters and cents that don't grow, and War Savings Stamps that do grow.

You buy a War Savings Stamp this month for \$4.15, next month it is worth \$4.16, the month after, \$4.17, and on January 1, 1924, it has grown to \$5.00.

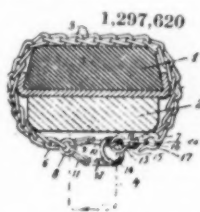
"But," you say, "a War Savings Stamp is not ready money? It grows all right, is a good investment, helps me save, but I can't spend it."

You're wrong—the War Savings Stamp is ready money—that is, ready enough money.

If you need money you have saved in War Savings Stamps—that growing money—you can get it from any postoffice on ten days' notice. You can get all you paid in and all the interest it has earned while it is growing for you, and the ten days' notice is one of its great features. You can't just rush out to spend your \$4.12 or \$4.25, or whatever it may be, in your War Savings Stamp. You have got time to think before you can spend it, and if you think before you spend you probably will not spend that W. S. S. money foolishly, but will spend it for something worth while. In other words, it is not merely growing money—it is also money with the magic power of helping you to get your money's worth—money tied up just enough to keep it from flying out of your pocketbook. And remember, the wise-spending string on your money in War Savings Stamps is your own string—the string that keeps your own wallet closed until you really need the money.

SECURES PATENT FOR UNIT NON-SKID CHAIN DEVICE.

Bishop White, West Hartford, Connecticut, assignor to American Chain Company, Incorporated, Bridgeport, Connecticut, has been granted United States patent rights, under number 1,297,620, for a unit non-skid chain device, described in the following:



The unit non-skid chain device comprising a tread chain and a securing chain and spoke chain permanently connected thereto, an annular loop member on the end of said spoke chain, a securing ring and securing hook on the end of said securing chain and adapted to pass through said loop member and be carried around a spoke and be disengageably hooked into one of the links of said tread chain to hold the same around the tire and rim of the wheel, said securing hook being formed with a substantially parallel constricted admission passage and a parallel sided hook locking link loosely embracing the shank of said hook and connected to said securing ring to be drawn into and substantially block said admission passage when there is substantial tension on said hook.

ADVERTISING CRITICISM AND COMMENT

Helpful Hints for the Advertisement Writer

As unmistakably individual as a khaki-clad soldier in a group of civilians is the advertisement of the Henry Heick Hardware Company which appeared in

head of the advertisement adroitly connects the store with the customer's sense of pride in the city of Louisville and its industrial and merchandising development. Knowledge of grammar is quite common in that great Kentucky town. Hence, the last paragraph of the editorial ought to be revised in order to remove a distraction which may lessen the persuasiveness of the advertisement as a whole.

An example of clear and terse description which contains no hint of exaggeration is found in the statement concerning aluminum syrup pitchers. There is an undeniably powerful selling argument in the assurance that it has a "patented feature that does not allow syrup to run down the outside." The special sale price of 73 cents for one week, set forth in big, bold figures, appeals to the thrifty housewife in search of genuine bargains.

A noteworthy feature of the advertisement under discussion is the logical arrangement of the articles. Thus, in panels on either side of the space devoted to chain door fasteners are mentioned such related goods as door bolts, night latches, and drawer and wardrobe locks—things which are naturally suggested by the central commodity and its purpose of protection against intrusion and theft.

Without giving an effect of overcrowding, every bit of space is utilized and sufficient portions are left open to produce the necessary contrast for easy reading. The speediest spider that ever spun a web gets no chance to string a single thread across the doorway of hardware stores which publish advertisements of the kind which induces buyers to "hike to Heick's."

* * *

FIND THE SELLING FORCE OF GOODS.

In preparing a retail advertisement it is necessary to discover the basic appeal of the merchandise to the prospective purchaser. This is sometimes easily discoverable, because it consists in simple appeal to the senses. For instance phonographs sell on their tone quality—appeal to the sense of hearing. Clothing sells on style—appeal to the eye. Mattresses are sold on comfort—appeal to feeling. Perfume is sold by its appeal to the sense of smell. Beverages appeal to the taste, and so on. But in some cases it is much more difficult to discover the basic appeal of the goods, and there the advertiser has to employ the greatest skill. But every article possesses some quality above all others that compete with it, and to discover this the advertiser must concentrate all the powers he can use. The very weaknesses of some things are the sources of their strength of appeal.

* * *

It is not necessary to put all the art ideas you know into your advertisement. Just try the plain type effect. It is rare enough to be singularly effective.

HIKE TO HEICK'S

For Hardware

Phone
City
or
Main
432

The population of Louisville to-day is given as 221,928, and is still growing. Just like "Hike to Heick's." The growth and success of a city depend upon its shipping facilities, manufacturing conditions and its shopping districts, both wholesale and retail. There are many stores in different lines of goods that stand out from all others, for many reasons. Price, quality, courtesy, prompt and efficient service are the real things that Get and Hold the trade. It is these things alone that has brought success and has made "Hike to Heick's" the "Really Better Place."

Mail
and
Phone
Orders
Given
Prompt
Attention



Aluminum Syrup Pitchers

Made of pure aluminum with spring lid and patented feature that does not allow syrup to run down the outside.

Sale Price
for One Week

73¢

Distributors of **YALE** Locks & Hardware

Royal Electric Vacuum Cleaners

The Best Electric Cleaner Made.
Sold on terms to meet your convenience. If you wish to rent one, you may do so for \$1.00 per day.

Door Bolts
and all kinds
of safety de-
vices that will
protect your
home from un-
lawful charac-
ters.

Chain Door Fasteners



With this device on your outside doors a knock may be answered and the door opened about four inches without fear of a tramp or other unwelcome visitor forcing his way into the house; special price

38c

Night Latches,
50c up.

Padlocks,
15c up.

Drawer and
Wardrobe
Locks, etc.

Time
Soluble
Solution
is
Excellent
For
Spray-
ing.

Hand And Pole Pruners

Early pruning of trees, shrubs, etc., is absolutely necessary to insure good growth and hardy plants. We have a large assortment of Pruners that range in price from \$1.00 upward. We also carry a stock of Pruning Saws and invite your inspection of our stock.

Arsenate
of
Lead

Black
Leaf
"40"

Electrical Appliances

WESTERN ELECTRIC WASHING MACHINES.
WESTERN ELECTRIC SEWING MACHINES AND MOTORS.
SIMPLEX IRON MACHINES.

Any of the above may be purchased on our divided payment plan to meet your convenience.
If you are contemplating purchasing, see us before doing so.

We Are Distributors in Louisville.

Auto
Sweep
Sifter
Sawers,
Big Shovel
Grass-
and Tree-
Sawer 12
Shed-
\$5.00

HENRY HEICK

HARDWARE COMPANY
INCORPORATED
322 W. MARKET ST.
Bet. 5th & 4th Sts.

Twistex
Strippers
For
Gutter
Blades,
Etc.,
\$5.00

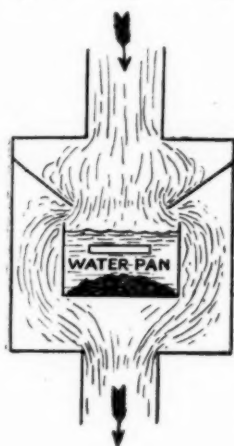
the *Louisville Times*, Louisville, Kentucky. The firm's slogan, "Hike to Heick's for Hardware," has an alliterative swing to it which suggests action and prompt decision. The editorial set in the box at the

HEATING AND VENTILATING

PATENTS AIR MOISTENING AND CLEANSING DEVICE.

John S. Nelson, Sioux Falls, South Dakota, has secured United States patent rights, for an air moistening and cleansing device, described in the following:

An air moistening and cleansing device comprising a casing having an inlet opening at the center of



the top and having an outlet opening at the center of its bottom, a water pan supported in said casing and extending from one to the other of two opposed vertical sides thereof, said water pan having its center in alinement with the centers of said inlet and outlet openings, and a pair of deflector plates each extending from one to the other of said opposed vertical sides, said plates being downwardly inclined from the other opposed verti-

cal sides of the casing and having their lower edges spaced apart, said edges being disposed above and adjacent to the center of said water pan and the distance between said edges being less than the diameter of the inlet opening, whereby the air current is flattened prior to its contact with the water in said water pan, said flattened current dividing into two thin flat currents and passing beneath said plates along the surface of the water, whereby to absorb maximum moisture from the latter and to deposit all dust and the like therein.

ADVERTISING KEEPS UP HIGH QUALITY.

"When a firm advertises," says a bulletin from the Associated Advertising Clubs of the World, "it calls sharp attention to the good points of its product, so that the people who use what the advertiser sells are alert. They look out for and expect the advantages described in the advertising. The goods have to live up to the description, for if they fail to do so, the advertising will hurt more than help."

"Not only will the individual purchaser be personally disappointed if the quality is not as described," says the bulletin, "but a person who has been fooled by such an advertisement is prompted, every time he sees it again, to mention its poor qualities to his friends. Advertising a poor article is bad business, and business men know it. That of itself should be sufficient assurance to the housewife that factories and stores which advertise are safer to deal with, for they have to make good in order to make their advertising pay."

PROVIDES AMPLE RETURN AIR SPACE.

The Gilt Edge Pipeless Warm Air Heater, shown in the accompanying illustration, is one of the new heaters recently put on the market by R. J. Schwab and



Gilt Edge Pipeless Warm Air Heater, Made by R. J. Schwab and Sons Company, Milwaukee, Wisconsin.

Sons Company of Milwaukee, Wisconsin. The Company states that this is not a "built-to-get-by" affair but is made of high grade materials, the same as its other heaters, by skilled workmen, without any skimping or "cheapening." It is said to give unusual heating and ventilating efficiency by providing ample return air space between the inner and outer casings.

R. J. Schwab and Sons Company declares that the making of this Gilt Edge Pipeless warm air heater is in response to

the demand for a better class of pipeless heaters and that the objections usually encountered in such heaters are overcome. The Company suggests that dealers write for its descriptive literature of the Gilt Edge Pipeless warm air heater and also for particulars of terms to dealers' and agency propositions with details of intensive selling helps. The address is R. J. Schwab and Sons Company, 285 Clinton Street, Milwaukee, Wisconsin.

THRIFT IS NOT MISERLINESS.

There's a vast difference between miserliness and really intelligent saving. Human happiness is in between—just as solid satisfaction lies between saving (wise spending) and foolish extravagance. The intelligent saver saves that he may have money to spend on worth-while things in the future.

The miser saves for money itself—not for what it will buy when accumulated. The intelligent saver wants to provide for emergency or old age but he also saves with the idea of more comfort, recreation, and happiness.

He simply accumulates enjoyment of his money; saves really to spend for well-thought-out purposes. He provides for his immediate necessities and for his future needs. The miser does not provide for present necessities or tomorrow's necessities.

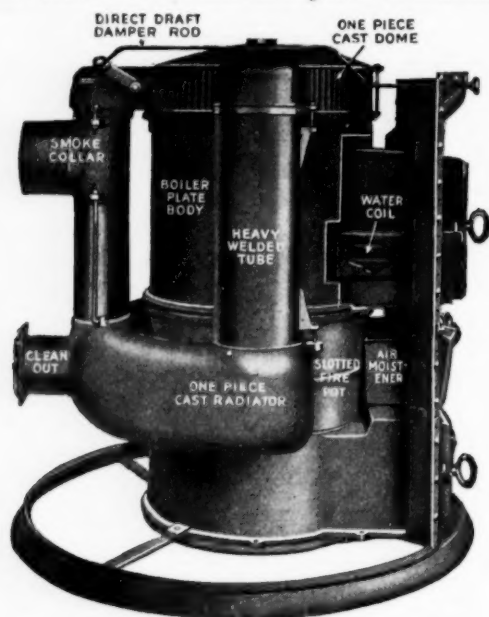
Intelligent savers use Thrift and War Savings Stamps to hold on to their money and to help it grow. By helping themselves, they help their Government.

HAS INTERCHANGEABLE GRATE BARS.

Several important improvements have recently been made to some of the warm air heaters manufactured by the Monroe Foundry and Furnace Company of Monroe, Michigan. In the accompanying illustration is shown a side view of the Floral City King Warm Air Heater. This heater has a simple device by which the grates are locked securely in place and any bar can be removed without disturbing the others. There are no bolts and no rights or lefts, as the two long or two short bars which make the set are interchangeable.

Ordinarily, the grates furnished are the triangular revolving pattern but the Company also offers an oscillating grate of close pattern. Either style of grate may be used without a change in the ash pit. The fire pot in this heater can be furnished in either the single piece corrugated pot or a smooth two piece pot of heavy pattern. The fire pots come in either 21 inches, 24 inches or 27 inches. These fire pots are made as straight as possible to prevent the ashes from clinging to the sides and also prevents the clinkers from forming a bridge above the grates.

The Floral City King heater burns hard or soft coal, coke, or wood. It is made both portable and brick-set.



Side View of Floral City King Warm Air Heater, Made by the Monroe Foundry and Furnace Company, Monroe, Michigan.

The fire doors are large and a shield or apron is hung just inside the door to keep the smoke from puffing out when the door is opened and when wood or soft coal is used. Dealers should address the Monroe Foundry and Furnace Company of Monroe, Michigan, for further particulars and a copy of its latest catalog.

LEARN BENEFITS OF PATIENCE.

If you have learned how to wait, you have mastered one of the hardest things about intelligent saving. For intelligent saving is merely postponed enjoyment—saving now to spend later for things more worth while to you.

You have the fun of anticipation and planning while you are saving, and then you have the joy of fulfillment when small sums saved have given you real buying power. You teach your dimes, quarters, dol-

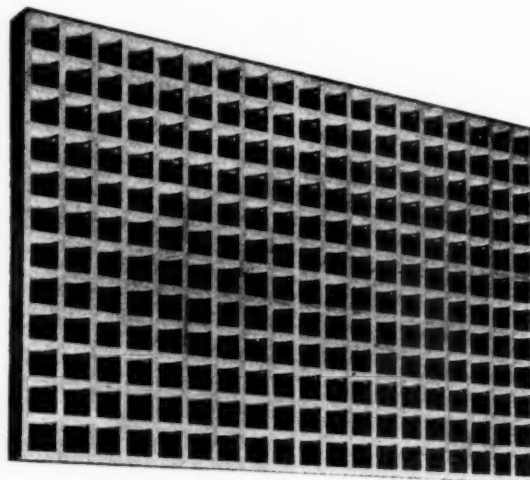
lars to wait for worth-while opportunities. Interest is added to the active fun of saving.

Foolish coins that buy nothing worth while, group themselves for worthwhileness. They may buy you peace on a "rainy day" or enable you to have your share in a "sunny opportunity."

Thrift Stamps teach quarters to wait. War Savings Stamps make dollars patient.

MAKES BIG VARIETY OF WOOD FACES.

The Dover Wood Face and Lumber Company of Dover, Ohio, has large tracts of timber. It operates its own saw mills and thus is able to obtain the most suitable material for its wood faces. The Company



Dover Wood Face, Made by the Dover Wood Face and Lumber Company, Dover, Ohio.

specializes on plain oak grills but it can furnish faces in cherry, curly birch, curly maple, quartered oak, walnut, and bird's eye maple. Wood faces of odd design or size may also be bought from this Company and it can make faces bent to any desired curve. In the accompanying illustration is shown one of the different designs which is made from substantial, straight-grained timber. It can be finished to match the wood work in the home. These faces may be adapted to different positions, namely, hall seats, window seats, built into walls under stairways, floors, and next to fireplaces. The Dover Wood Face and Lumber Company issues a catalog showing its various styles of wood faces, and those interested should write to the Company at Dover, Ohio.

TEACH CHILDREN RIGHT PRINCIPLES.

Along with the three "R's" are you teaching your children the three "S's" of business success: Saving, Spending, Security?

Will they know the value of money? How to make it buy what will repay them for their work and stimulate them to greater industry?

Or will money always be merely a temptation to them?

The first step is for the child to learn the joy of postponed enjoyment, to become able to forego trifles today to acquire really worth-while things—necessities or luxuries—tomorrow.

Thrift Stamps and War Savings Stamps are ready teachers of worth-while money-using habits.

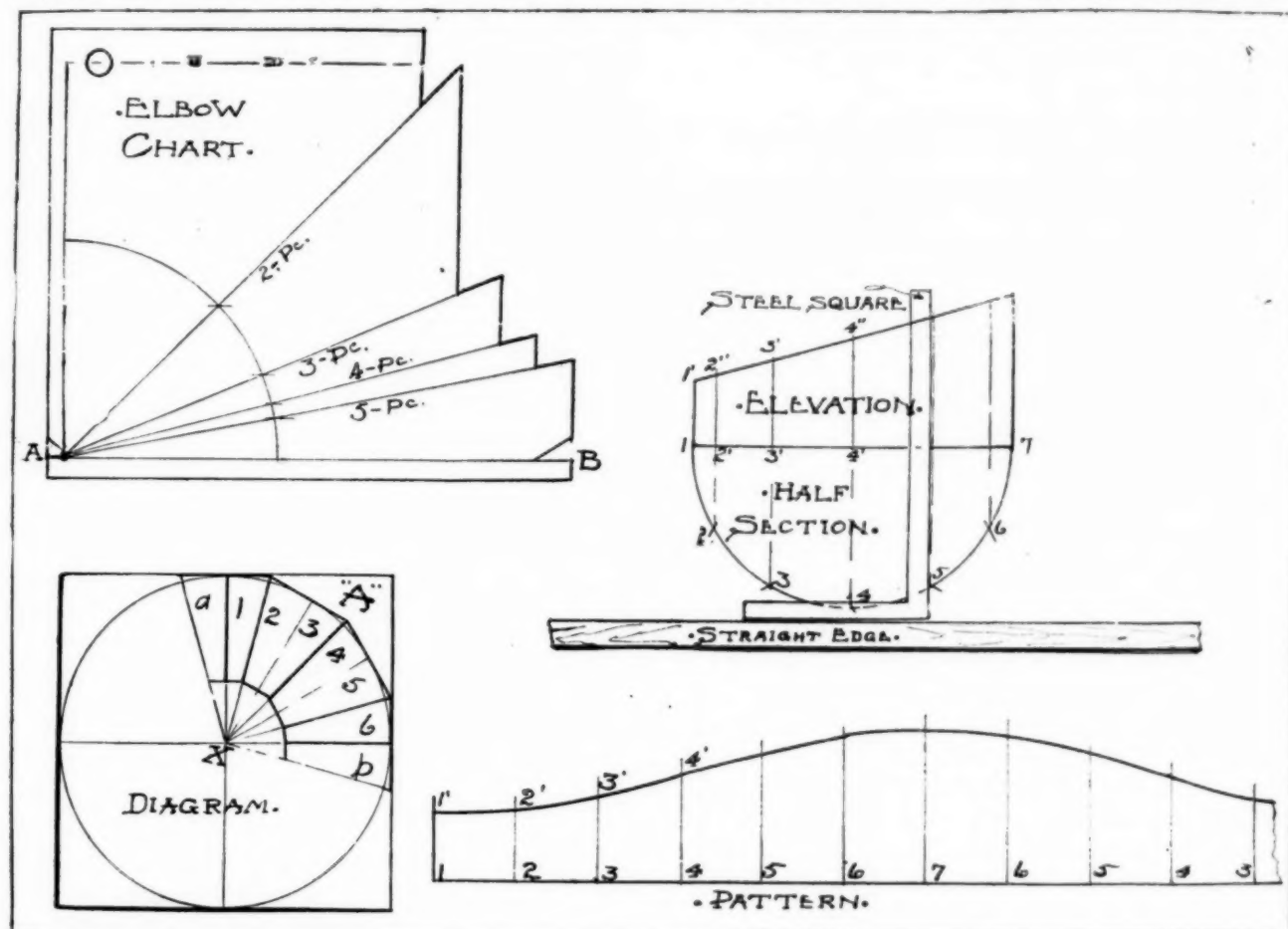
PRACTICAL HELPS FOR THE TINSMITH

PATTERNS FOR ELBOW DEVELOPMENT.

BY O. W. KOTHE.

In country town tin shops the matter of laying out elbows is always of interest especially by some workmen who make considerable work of it. In our diagram we show where the miter lines for any number of pieced elbow are obtained. In this case we have

ous miter lines can be described so you have a 2 piece, 3 piece, 4 piece, and 5 piece elbow miter line. Then any time you wish an elbow simply take this chart and mark off that miter line, similar as shown by the elevation in our working drawing. Below this miter line draw the half section and divide into equal spaces. This half section is to designate that the elbow is round and this half circle is divided into equal spaces in or-



Patterns for Elbow Development.

a four piece elbow. Two spaces are allowed for each piece but as the end pieces are only half as long as the middle pieces, therefore 1 space must be subtracted from each end. This does away with the half gore a and b, leaving 6 spaces in the quarter circle. The first is a miter line. If a three piece elbow were to be made you would say 3×2 are 6 minus 2 are 4. Then 4 would be the correct amount of spaces to divide the quarter circle heel. If a 5 piece elbow were desired then 5×2 are 10 minus 2 would be 8, therefore the quarter circle of heel is divided into 8 equal parts and the first space would be the correct miter line for developing the pattern.

To save considerable time in laying out an elevation each time an elbow is to be made, an elbow chart as above may be made. The line A-B can be used as a base line and with the aid of a quarter circle the vari-

der to establish points in the miter line and stretchout of equal distance apart.

A straight edge can be nailed below the elevation so it is parallel to the base line 1-7. Then a steel square can be used for erecting lines to the miter line as in points 1'-2"-3"-4", etc.

To set out the pattern the girth for elbow can be placed on a straight line and the points in the half section can be transferred to this line seeing so you have twice the number of spaces there are in the half section. From each line erect stretchout lines and then with dividers pick the lengths from elevation as 1-1', 2'-2'', 3'-3'', 4'-4'', and transfer them into pattern as 1-1', 2-2', 3-3', etc. This establishes the miter cut for the pattern. All the others can be laid out from this one. Edges for seaming should be allowed extra.

ISSUES CALL FOR FIRST MEETING OF NEW BOARD OF DIRECTORS.

In compliance with a request of E. B. Tonnsen, President of the Master Sheet Metal Contractors' Association of Wisconsin, the Secretary of the organization, Paul L. Biersach, has issued a call for the first meeting of the new Board of Directors of the Association, to be held Wednesday, May 7, 1919, at 3:30 p. m., in the Builders' and Traders' Exchange, 456 Broadway, Milwaukee, Wisconsin. Those who find it impossible to attend are urged to mail the secretary a synopsis of their ideas with regard to plans for the development and general welfare of the Association.

FURNISHES A GRAPHIC ARGUMENT IN FAVOR OF GOOD CORNICE WORK.

BY LOUIS GICLAS.

At the risk of butting in and being declared out of order (not being on the committee) I submit to you a powerful advertisement for sheet metal cornices. The photograph herewith shows two buildings on a very prominent street in Washington, D. C. The one on the left, a pie a la mode front, quasi Egyptian effect of fifteen years standing in its present aspect, shows what they tried to do with terra cotta when arriving at the top and brackets were in place. It was found that the plancher and crown would be too heavy for safety, and they were left off. The toothed sky line effect, seems to say to the little one next door, "You're passé. I am fighting you to death." The architect made one other mistake in making the lion's face in the middle of the front so small that across the street it might be taken for a monkey face. It is probable that the architect monkeyed with the catalog of some large advertising firm of clay workers. Lucky for us that the lion's face is not larger—else we might be frightened out of our rightful possessions still more.

The building is owned by a large estate, and the storekeeper has no knowledge of architecture and probably has never considered the ensemble of his front. It is a general store, pawnshop like, and it would seem that Atlas with all his strength can not support a terra cotta cornice. He was afraid of getting his head cracked.

Now for the little fellow on the right. He is old and gone to the rookery stage. He is half blinded too, you will notice, but some of his lights are larger than those of Atlas—some relief. This rookery was originally of the outline shown above, a ragged eave with round hanging gutter, which is always unsightly owing to the necessity of giving it pitch to the spout.

We cornice makers all have been called on to embellish such fronts with such varieties of trimmings, as in this case window caps, etc. The rookery walls are probably fifty years old, and the stuck-on-afterwards cornice, thirty years. The window caps and cornice are true and even, though the walls are cracking and settling.

This is a striking feature of the ease of mounting sheet metal cornices for permanent effect. Furthermore, little rookery has a big brother near by; otherwise Atlas might have upset him into the alley on the right. The oriel shown on the extreme margin, 929, is a splendid example of sheet metal cornice work, seven stories of it, and is in place about twenty-five years. This building was erected and used for a dairy and the store had the original "Dairy Lunch." In opening it, the store made a unique advertisement by sending the key away tied to a balloon, saying it would never be closed and needed no key. On top, there was a roof garden with sheet metal cows pasturing, so to appear. This was a fine job of our art and overtopped all adjacent buildings. This branch of our



Illustrating Architectural Superiority of Metal Cornice Over Terra Cotta Work.

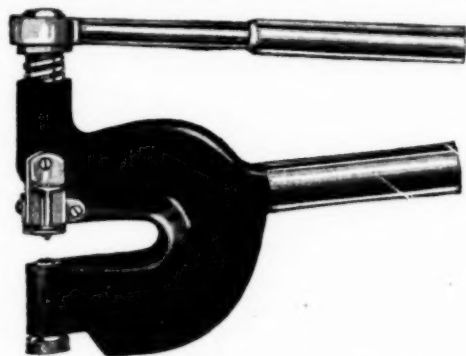
trade needs more education. Let there be no more "cornish" makers, but liberal offerings for advertising good work.

OPENS NEW SHEET METAL SHOP.

The firm of Thole and Pohl has opened a general sheet metal and warm air heater shop at 938 Gratiot Avenue, Detroit, Michigan, and wants to receive catalogs of supplies and accessories suitable to the business. Both members of the firm are experienced mechanics and are thoroughly acquainted with all branches of the trade. As successful contractors, they are familiar with the commercial aspects of sheet metal work and are prepared to handle a high class of orders.

NEW PUNCH IS EASY TO OPERATE.

In the accompanying illustration is shown the "Jiffy" Punch, manufactured by Paul W. Koch and Company, 19 South Wells Street, Chicago, Illinois. It weighs five pounds and is nine and a half inches long. This punch works in a small space, punching 5/32, 3/16, 7/32 and 1/4-inch holes in metal up to ten gage, and requires no adjusting. There is a deep throat and one-piece automatic, disappearing stripper which gives a clear view to the punch and punch mark for the next operation. It allows several sheets to be punched

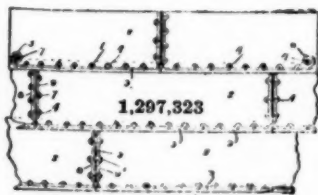


"Jiffy" Punch, Made by Paul W. Koch and Company, Chicago, Illinois.

at one time. The manufacturers claim that the punch will not leave a bur on the metal, stating that it will not twist or turn in operation. It is said that the "Jiffy" punch can be operated all day without tiring the mechanic as there are no long, awkward handles, the operator is brought close to the material, punch marks follow quickly and accurately, it is light in weight, only a half turn of the lever is required to drive the punch through the metal and the handle above the center keeps the punch naturally upright. Paul W. Koch and Company, 19 South Wells Street, Chicago, Illinois, fully guarantees the "Jiffy" punch and dealers are advised to write and ask for Circular "A."

ROOFING CLIP IS PATENTED.

Under number 1,297,323, United States patent rights have been granted to Robert Clough Clark, Winnipeg, Manitoba, Canada, for a roofing clip, described in the following:



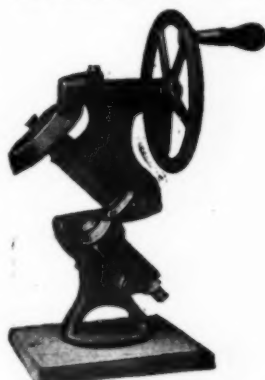
extremities thereof terminating in coiled ends.

A roofing clip comprising a length of wire fitted throughout its length with spaced loops and having the loops all turned in the same direction and having the

FEEDS MATERIAL AUTOMATICALLY.

The Marshalltown Throatless Shear made by the Lennox Throatless Shear Company of Marshalltown, Iowa, and shown in the accompanying illustration, was specially designed for cutting in and out curves, straight or irregular shearing, and circle work. It also does beveling and splitting of plates. The work is finished as it leaves the machine and there is no buck-

ling nor stretching of material. The Marshalltown Throatless Shear is made in several different sizes,

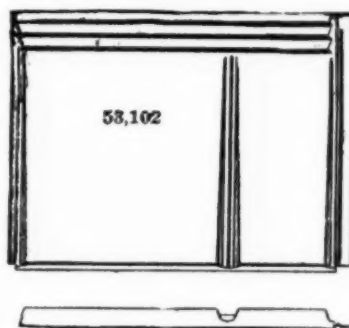


Marshalltown Throatless Shear, made by the Lennox Throatless Shear Company, Marshalltown, Iowa.

for working up sheets from the thinnest metal up to and including 1/2 inch boiler plate. The pinions are of machinery steel with the teeth cut. The gears are of gray iron, the teeth of all fast running gears, being cut from the solid metal. The heads are made of high grade steel castings. Special carbon tool steel, oil tempered, is used for the blades. All power shears are equipped with a sensitive friction clutch pulley, or gear if motor driven, which enables the operator to start and stop the shear instantly. It shears up to and including 1/4 inch capacity and is made with the overhead drive. The 3/8 inch and 1/2 inch shears have a gear drive enclosed in the base. There are two cutters used on all these shears. The corrugated cutter is driven and the other cutter runs loose in the sleeve. The corrugations in the cutter feed the material automatically. Dealers should address the Lennox Throatless Shear Company, Department A A, Marshalltown, Iowa, for further details.

ORNAMENTAL DESIGN FOR A METAL SHINGLE.

David F. Creighton, Avalon, Pennsylvania, has been granted United States copyright on the ornamental



November 13, 1916, under the serial number of 131,148.

design for a metal shingle which is shown in the accompanying illustration, under number 53,102. The term of patent is fourteen years. The claim was filed

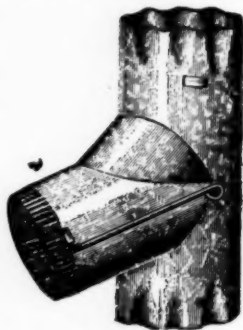
HOME STUDY INCREASES THE EARNING POWER OF TINSMITHS.

Tinsmiths are in great demand. Those who are skilled workmen can command good salaries at all times. The National School of St. Louis, Missouri, of which O. W. Kothe is the head, offers special home study courses. These courses show how to make barn ventilators, chicken troughs, tanks, all warm air heater fittings, radiator repairing, together with plumbing, steam and hot water heating. The National School was founded in 1910. Mr. O. W. Kothe, the owner, has had a great deal of experience in the theoretical and practical side of pattern drafting. He personally conducts some of the classes at the school. Booklet and drawings giving complete information about classes, and also the home study

courses, are furnished free of charge upon request. Those interested should address The National School, St. Louis, Missouri, for further particulars.

NEEDS NO EXTRA PIPE OR ELBOWS.

The Centennial Rain Water Cut-Off made by the Sullivan-Geiger Company, Indianapolis, Indiana, is shown in the accompanying illustration. This cut-off is durable and so constructed as to withstand all conditions of the weather. As it is a well-known fact that durability is one of the main things to be looked for in a rain-water cut-off, particular attention should be paid to the Centennial. It is made of high grade material which withstands rust and corrosion and there is little chance of its collapsing under strains of any kind. It is claimed by the Sullivan-Geiger Company that the Centennial Rain Water Cut-Off is the only single cut-off made to fit corrugated and plain pipe and which can be used without extra pipe or elbows. It is also adjustable which is a very desirable feature in a cut-off. Taking all these excellent characteristics in mind, the dealer can readily see what a fine product this cut-off is and he can secure further particulars by addressing the Sullivan-Geiger Company, 501-509 Madison Avenue, Indianapolis, Indiana.



Rain Water Cut-Off Made by Sullivan-Geiger Company, Indianapolis, Indiana.

BOOKLET CONTAINS VALUABLE DATA.

The man who buys sheet metal building products during these days of shifting prices is often compelled to waste precious time hunting through price lists for figures upon which to base his calculations. After obtaining them, he is under the further necessity of getting particulars as to territorial differentials, freight allowances, shipping weights, dimensions, and many other details which enter into the sum total of costs. Consequently he will welcome a booklet, such as that issued by the Milwaukee Corrugating Company, Milwaukee, Wisconsin, giving him in compact form, all this information. The "Milcor" price list under date of April 15, 1919, furnishes revised net prices on sheet metal building products and farm specialties manufactured by the Milwaukee Corrugating Company. All the essential details are included in one booklet, thus furnishing a reliable basis upon which to make complete estimates. Dealer and sheet metal contractor may obtain this helpful publication by writing to the Milwaukee Corrugating Company, Milwaukee, Wisconsin.

TELLS WHY HE WAS NOT PROMOTED.

A magazine devoted to the welfare of the employees of an Eastern railroad gives the following reasons why a worker failed to obtain promotion. The reasons being of general application, they are herewith reproduced:

1. He grumbled.
2. He watched the clock.
3. He was stung by a bad look.

4. He was always behindhand.
5. He had no iron in his blood.
6. He was willing but unfitted.
7. He didn't believe in himself.
8. He asked too many questions.
9. His stock excuse was "I forgot."
10. He wasn't ready for the next step.
11. He didn't put his heart in his work.
12. He learned nothing from his mistakes.
13. He felt that he was above his position.
14. He was content to be a second-rate man.
15. He ruined his ability by half doing things.
16. He chose his friends from among his inferiors.
17. He never dared to act on his own judgment.
18. He did not think it worth while to learn how.
19. Familiarity with slipshod methods paralyzed his ideal.
20. He tried to make "bluff" take the place of hard work.
21. He thought it was clever to use coarse and profane language.
22. He thought more of amusements than of getting on in the world.
23. He didn't learn that the best of his salary was not in his pay.

BUYS SHEET AND TIN PLATE COMPANY.

The purchase by the Republic Iron and Steel Company of the De Forest Sheet and Tin Plate Company is confirmed by John A. Topping, chairman of the former company. He states that "the contract has been entered into with the De Forest Sheet and Tin Plate Company whereby the Republic Iron and Steel Company purchases the entire capital stock and property. The deal becomes effective May 1, 1919."

NOTES AND QUERIES.

Solder in Round Form.

From the H. Christensen Manufacturing Company, Fort Atkinson, Wisconsin.

Please advise us where we can buy solder in round form like wire.

Ans.—Merchant and Evans Company, 347 North Sheldon Street, Chicago.

Baker Eave Trough Hangers.

From E. B. Abbott, Lock Box 167, Painesville, Ohio.

Where can I get quotations on the Baker Eave Trough Hangers?

Ans.—J. R. Baker and Son, Kendallville, Indiana.

Wire Brushes.

From W. P. Myers, Linden, Michigan.

Kindly tell me where I can obtain wire brushes.

Ans.—American Brush Corporation, Incorporated, 1222 West Madison Street; W. J. Dennis and Company, 2120 West Lake Street; and Phoenix Brush and Manufacturing Company, 160 North Wells Street; all of Chicago.

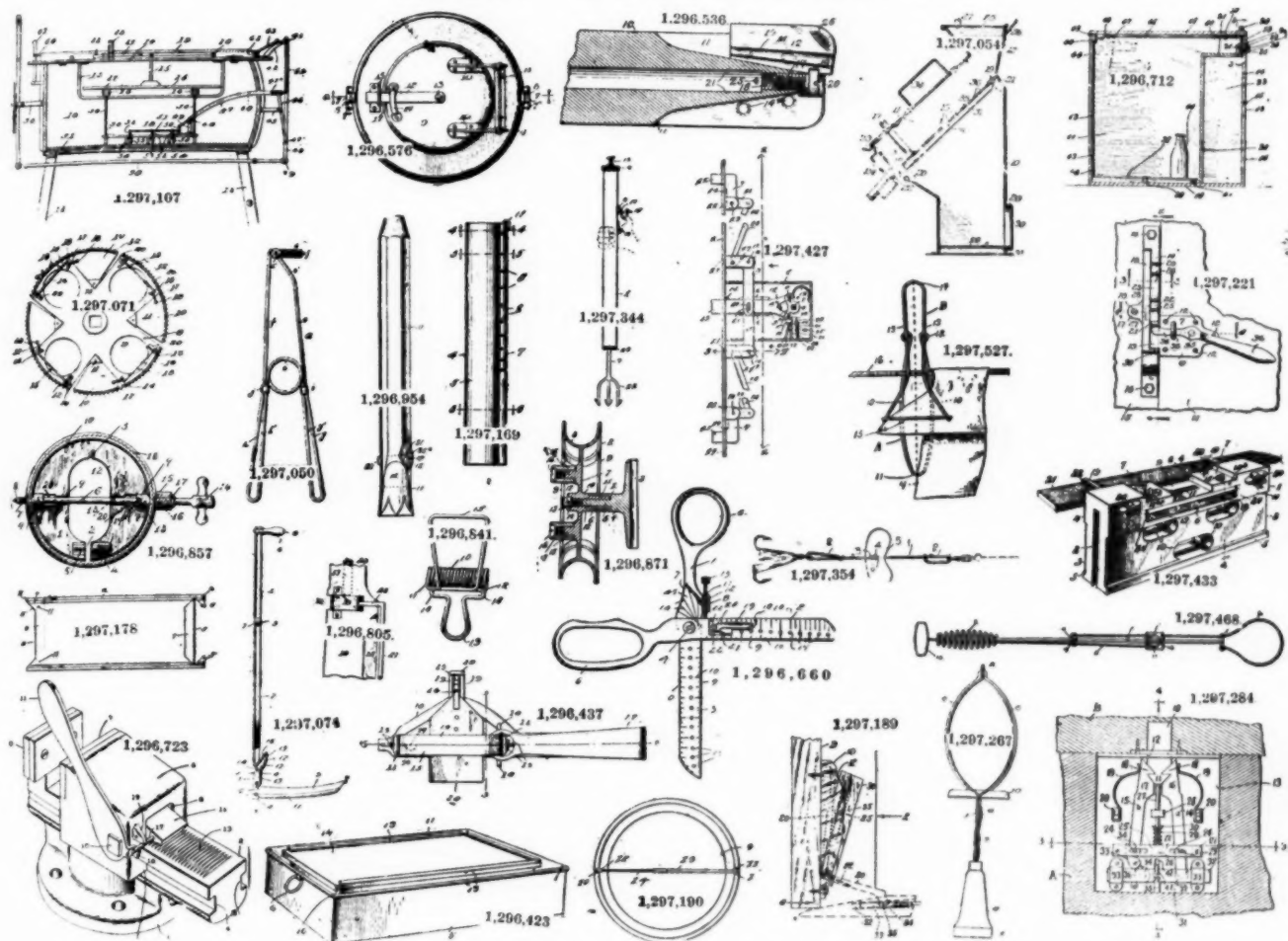
Galvanized Tanks.

From J. H. Shannon, Cogswell, North Dakota.

Can you advise who makes a galvanized oil tank for gas or kerosene? It should hold 350 or 400 gallons.

Ans.—Chicago Steel Tank Company, 733 South Halsted Street; C. Doering and Son, Incorporated, 1375 West Lake Street; and Harris Brothers Company, 35th and Iron Streets; all of Chicago.

NEW PATENTS.



1,296,423. Baking-Pan. William Neef, Pocatello, Idaho. Filed Mar. 29, 1918.

1,296,437. Trap. Jacob B. Sitts, Wampsville, N. Y. Filed Sept. 4, 1918.

1,296,536. Expanding-Reamer. Joseph P. Leach, Buffalo, N. Y. Filed Nov. 20, 1916.

1,296,576. Animal-Proof Garbage-Can. Gurn S. Webb and Olof B. Anderson, Marquette, Mich. Filed Sept. 5, 1916.

1,296,660. Combined Scissors and Square. Zerah G. Hayden, Eldora, Iowa. Filed Mar. 15, 1918.

1,296,712. Combination Milk and Letter Box. Frank Szaniszlo, Cleveland, Ohio. Filed Oct. 5, 1918.

1,296,723. Bench-Vise. Milton E. Winans, Newark, N. J. Filed Dec. 26, 1917.

1,296,805. Knife. Boleslaw Holownia, Syracuse, N. Y. Filed Dec. 10, 1918.

1,296,841. Clothes-Pin. William C. Neal, Abilene, Tex. Filed Aug. 20, 1917.

1,296,857. Damper. John C. F. Schafer, Mount Pulaski, Ill. Filed Oct. 4, 1915.

1,296,871. Fishing Reel. Dewitt C. Southworth and Francis I. Hardy, South Bend, Ind. Filed Aug. 8, 1914.

1,296,954. Joint for Drill-Bits and Other Purposes. Henry Haus, Pope Valley, Cal. Filed Aug. 30, 1918.

1,297,050. Gas-Lighter. Sachary Siegfried Werschansky, New York, N. Y. Filed Oct. 26, 1918.

1,297,054. Ash-Sifter. Abe Areson, Chicago, Ill., assignor of one-half to Jacob Jay Cohen, Chicago, Ill. Filed Mar. 1, 1917. Renewed Jan. 21, 1919.

1,297,071. Washing-Machine. John Botts, Lane, Kans. Filed June 28, 1918.

1,297,074. Scythe. John Bradley, Pawhuska, Okla. Filed May 14, 1918.

1,297,107. Washing-Machine. Clarence E. Crow, Chesapeake, Ohio. Filed Aug. 30, 1918.

1,297,169. Fence-Post. Frank X. Hoepf, Tiffin, Ohio. Filed Nov. 30, 1917, Serial No. 204,741. Renewed Jan. 28, 1919.

1,297,178. Metal Roof Construction. James D. Jones, Dunville, Ky. Filed Nov. 3, 1917.

1,297,189. Door-Check. Miles J. Lawler, Denver, Colo. Filed Aug. 16, 1918.

1,297,190. Pie-Plate. Jasper C. Lawson, Calexico, Cal., assignor of two-fifths to George Holoway, Calexico, Cal. Filed Apr. 3, 1917.

1,297,221. Door-Catch. Edward Mikkelsen, Chicago, Ill. Filed Mar. 28, 1918.

1,297,267. Flycatcher. Gustav Sprengel, Wheaton, Ill. Filed Aug. 30, 1917.

1,297,284. Lock. Frank Wisniewski, Washington, Pa. Filed June 8, 1918.

1,297,344. Fish-Spear. Christopher C. Glass, Bessemer, Ala. Filed Nov. 27, 1918.

1,297,354. Wiggling Fish-Lure. James William Jay, Baltimore, Md. Filed Mar. 19, 1917.

1,297,427. Lock. William S. Wightman, Norwich, N. Y. Filed Aug. 13, 1917.

1,297,433. Saw Gage and Jointer. Lyman A. Avery, Green Lake, N. Y. Filed Apr. 17, 1918.

1,297,468. Animal-Catcher. Robert D. R. Holt, Rushville, Ind. Filed June 20, 1918.

1,297,527. Clothes-Pin. Ben Wright, Blackshear, Ga. Filed Sept. 25, 1916.

WEEKLY REPORT OF TRADE AND THE MARKETS

STEEL TRADE LOOKS WITH DISFAVOR UPON ADDITIONAL REDUCTIONS IN PRICE OF PRODUCTS.

The removal of the bonus paid steel makers by the British Government last week raised the price of steel in the British home market to the point at which American competition in the English market on the basis of present prices gives the American producers a decided advantage. Consequently, the trade looks with disfavor upon further reduction in prices as a menace to foreign trade.

The only obstacle in the way of effective competition in England and the continent by American producers is formed by high freight rates, land and sea. Even this handicap is not insurmountable at present levels. This situation has developed more talk of the enactment of "anti-dumping" tariffs in Great Britain, and some action along that line would certainly follow further reductions in American prices. The fact that sales of foreign goods in any country's market at prices equal to those charged in the market in which the goods are produced do not constitute "dumping" is not expected to make any difference in the agitation for tariffs in England. High costs prevent the English manufacturer meeting the prices that can be profitably quoted by the American producers, and the only remedy short of drastic cuts in costs lies in tariffs.

In the opinion of the steel trade the situation demonstrates the futility of the efforts to force price deflation. In the event American producers are forced to further reduce their prices in an effort to create a fictitious restoration of pre-war levels, the other producing countries of the world will simply put up the bars against American goods of all sorts, and this country will be left to enjoy its low levels of prices at home.

The war has reversed the geographical position of low cost production. Before the war Europe sold its goods in our market below the costs of production here. We retaliated to some extent by selling our goods in Europe at below cost. This was possible because the producers of this country found it profitable to engage in capacity production when they could sell the surplus production at a slight concession. Steel makers no longer need to sell below cost to compete in world markets. Their costs are high but they are not as high as those in European countries. Those countries are making no effort to force deflation as a measure for meeting outside competition. They know that the whole movement is based on an economic fallacy, and are taking other steps to protect themselves against the trade aggression of this country. Further forced decreases in prices on this side of the Atlantic, in the opinion of the steel

trade, will merely aggravate the situation and result in the erection of a tariff wall which will isolate this country.

Much doubt is expressed that the request from President Wilson that negotiations be resumed between the Railroad Administration and the Industrial Stabilization Board will prove effective. The steel trade believes that Mr. Hines has pronounced himself too emphatically to permit his withdrawing with dignity. On that account very little interest in the new effort to reach an agreement is being shown in the trade.

STEEL.

Exporters continue to hold off in the expectation that further readjustments in prices may grow out of the differences between the Industrial Board and the Railway Administration; this view of the subject is not shared by the trade. The makers of machine tools expect certain buyers to hold off until there is no room for doubt that prices have touched bottom; they expect that consumers will reach this conclusion much sooner than is generally expected. There is very little likelihood that prices will go much lower within the year. It is possible that some steel makers will break away after a time and quote prices below present levels, but the capacity of the makers will not be sufficient to materially affect the market. Talks of readjustments about June 1 are founded on the hopes of the rumor makers rather than on any substantial reason for believing that they will be made.

COPPER.

The copper market during the past week has been devoid of any new features and buying was confined entirely to the routine demand for immediate requirements. As present demand is still below the curtailed production, new stocks are added every month to the accumulated surplus, but despite this fact producers are holding the metal steady within a narrow range of fluctuations, and electrolytic is still held at 15¼ to 15¾ cents.

The all important question involving the future of copper remains whether Europe will be able, after restoring of peace, to absorb the accumulated stocks which are held at this side. As England, France and Italy are also holding sufficient reserve stocks to bridge them over at least for the current year, hopes of producers are turned to the middle European countries, which are bare of copper, and would be in a position under peaceful conditions to absorb a large tonnage.

April sales have been rather under than over 20,000,000 pounds and with the present attitude of consumers there seems small reason to anticipate that total April sales will be over 25,000,000 pounds or

about one-third of what they were in March. It is pointed out, however, that domestic melting is not averaging much if any over 40,000,000 pounds a month and as purchases made during the first three months aggregated 150,000,000 pounds, additional purchases of 25,000,000 pounds this month would fully meet home requirements. Some allowance must be made, however, for export sales.

Although some of the large producing interests have shown no anxiety to make sales some of the smaller producing interests have been willing to make concessions to attract buyers and at least one large producer, late in the week, made overtures to buyers, practically offering Electrolytic copper at 15.25 cents per pound for early shipment. Other producers were seeking business at 15.37½ cents. No change was made in the asking prices for Lake or for Casting copper, which grades were quoted at 15.50 cents and 15 cents respectively, but there was not enough inquiry to seriously test the market.

TIN.

The situation as regards spot tin continues unchanged, but it is hoped that the United States Steel Products Company is each day reducing the Government stocks by its sales to consumers, and that June 1st will see all restrictions raised.

No statistical material is published and the trade is entirely in the dark in regard to available supplies on this side. How far the Government holdings have been reduced is only guesswork. When a free market will be declared, the accumulated meltings of Bolivian tin will be practically the only reserve on which consumers can fall back, and it is generally considered that this shortage and limitation of supplies will tend to keep the price of tin up until new imports will arrive at this country.

LEAD.

The St. Louis lead market remains dull at 4.75 cents. Some of the larger independents are refusing to offer any lead at this price, as they contend that this is below the cost of production, and that they prefer to shut down their plants, rather than to accept this price. Buyers however, contend that they are able to get enough lead for their limited requirements at prices as low as 4.70 cents.

SOLDER.

No changes have occurred in the solder market, prevailing prices in Chicago being as follows: War-ranted, 50-50, per pound, 40.5 cents; Commercial, 45-55, per pound, 37.2 cents; Plumbers', per pound, 33.9 cents.

SPELTER.

The spelter market is quiet at 6.10 cents. There is practically no demand and sellers appear indifferent in regard to sales. Smelters contend that present prices are below the cost of production. The labor situation continues to be threatening, and a further decrease in the output is expected. Receipts for last week were unusually light, being much smaller than those for the preceding week, and they also were

much smaller than the shipments. The latter were only a little more than one-half as large as the shipments for the preceding week. The demand from consumers shows no improvement, but at 6 cents f. o. b. East St. Louis it is believed that a good business could be done for prime Western. Late last week 6.05 cents was paid for April and May by dealers and in some cases by producers who were finding difficulty in filling their April obligations on account of labor troubles at their smelters, also there were bids from consumers at 6 cents which, as far as can be traced, are still unfilled.

SHEETS.

Buying is somewhat sluggish. Galvanized sheets are not much in demand, but there is considerable activity in blue annealed. Automobile demand continues brisk. In general, it may be said that the Hines-Peek controversy acts as a brake on the market.

TIN PLATE.

A steady tone is noted in tin plate and sellers ex-store New York are holding coke tins at \$8.55 per hundred pounds, 14x20, with other weights in proportion.

OLD METALS.

Wholesale quotations in the Chicago district which may be considered nominal, are as follows: Old steel axles, \$26.00 to \$28.00; old iron axles, \$23.00 to \$25.00; steel springs, \$17.00 to \$17.50; No. 1 wrought iron, \$15.50 to \$16.00; No. 1 cast, \$21.00 to \$21.50, all net tons. Prices for non-ferrous metals are as follows, per pound: Light copper, 10¾ cents; light brass, 6¼ cents; lead, 3½ cents; zinc, 3 cents; cast aluminum, 17½ cents.

PIG IRON.

There are only few inquiries coming out for pig iron beyond those for small tonnages that are absolutely required, and sales are confined entirely to these essential needs. Buyers are not interested in the market beyond the present half year. On the other hand, producers are making no efforts to interest them in their requirements over that period. Prices are not strong, or even firm, and apparently all that is necessary to develop an open and competitive market is the appearance of a bona fide inquiry involving a good sized tonnage. No price changes are made against the small inquiries which presently are coming to the market.

Pig iron production is steadily declining and in some territories has fallen off to as low as 50 per cent of furnace capacity. The market continues exceedingly quiet and sales of iron, which had shown a fair expansion before the price tangle, dropped off sharply during the past and the present week. Furnaces are generally quoting the prices which were agreed with the industrial board of the Department of Commerce. With reference to further reduction, makers cannot see their way clear to selling lower priced iron. As long as freight rates are not reduced, it is not thought that prices can be reduced materially.

BLACKING, STOVE. (See Polish)

BLADES, SAW.

Butchers'.

Standard, 1 & 1½-in. Nets

Clock Spring. "

Star. "

Hack.

Atkins. 5%

Star. Nets

Wood.

Disston

Nos. 6 66 26

\$8 00 \$8 50 \$8 00

Atkins

Nos. 2 14 18

\$3 85 \$6 50 \$4 75

BLOCKS.

Snatch.

Wooden. Plus 10%

Tackle.

Iron Strapped. Plus 10%

BOARDS.

Store.

Wabash Crystal. Net Prices

Wabash Oriental. "

Wabash Mosaic. "

Wabash Delft Enameled. "

Wabash Art Inlay. "

Wash.

No. 760, Banner Globe, (single)

..... per doz. \$5 25

No. 652, Banner Globe, (single)

..... per doz. 6 75

No. 801, Brass King. 8 25

No. 860, Single—Plain Pump 6 25

BOBS, PLUMB.

No. 16, Stearns' Hexagon all steel per gross \$50 00

No. 17, Stearns' Hexagon all steel 65 00

BOLTS.

Carriage, Machine, etc.

Carriage, ½x6 and sizes smaller. and sh. shorter. 50-5%

Carriage, sizes larger and longer than ½x6. 30-10%

Machine, ½x4 and sizes smaller and shorter. 50-10-5%

Machine, sizes larger and longer than ½x4. 40-5%

Stove. 75%

Tire. 60%

Mortise, Door.

Gem, iron. 5%

Gem, bronze plated. 5%

Barrel.

Cast. Nets

Wrought. "

Wrought, bronzed. "

Flush.

Wrought. "

Spring.

Wrought. "

Wrought, heavy. "

Square.

Wrought. "

BORERS.

Angular.

Miller's Falls. per doz. \$23 00

Sill borers, No. 51. 34 00

52. 39 50

Burg.

Enterprise Mfg. Co.'s No. 1. 10%

" No. 2. 10%

BOXES.

Mail, No. 2 4 10

Per doz. \$18 00 23 00 29 00

Mitre.

Stanley's. Net Prices

No. 2, Perfection pattern, per doz. \$26 50

BRACES.

Fray's Genuine Spofford's. 20&10%

No. 08. \$7 50

No. 010. 8 00

BRACKETS.

Hay Rack.

Wenzelmann's No. 1, per doz. sets. \$18 00

Wenzelmann's No. 2, per doz. sets. 19 20

Shelf.

Wrought Steel. 40%

Well.

Oak, Wrought Iron Riveted Top Ears. per doz. \$8 00

BURRS, RIVETING.

Copper Burrs only. 25% above list

Tinner's Iron Burrs only. 30%

BUTTS.

Cast Iron. 7½%

Wrought Brass (New List). Plus 5%

Wrought Steel, Bright. 40%

Wrought Steel, Japanned. Net prices

CALIPERS.

Double. Nets

Inside and Outside. "

Wing. "

CALKS.

Logger's Boot.

(Lufkin R. Co.'s), per M. \$7 00

Toe.

Blunt and medium, 1 prong, per 100 lbs. \$6 00

Sharp, 1 prong, per 100 lbs. 6 50

CANS.

Milk.

Elgin.

Gals. 5 8 10

Each. \$4 00 \$5 15 \$5 15

Iowa Pattern.

Gals. 5 8 10

Each. \$4 00 \$5 15 \$5 15

CAN OPENERS.

See Openers.

CAPS, GUN.

See Ammunition.

CARPET STRETCHERS.

See Stretchers.

CARRIERS.

Hay.

Diamond, Regular. each, Nets

Diamond, Sling. "

CARTRIDGES.

See Ammunition.

CASTERS.

Standard—Ball Bearing. 50&10%

Bed. 55%

Common Plate.

Brass Wheel. 15%

Iron and porcelain wheels, new list. 50%

Philadelphia Plate, new list. 50%

Martin's. 40%

CATCHERS, GRASS.

No. 160S, per doz. \$12 25

No. 165S, " 14 01

CEMENT, FURNACE.

American Seal, 5 lb. cans, net \$0 45

" " 10 lb. cans, " 90

" " 25 lb. cans, " 1 87

Pecora, 5 lb. cans. 45

" 10 lb. cans 90

" 25 lb. cans. 1 87

CHAIN AND CHAINS.

Breast Chains.

Doubleslack. doz. pairs, \$8 50

With Covert Snaps " 5 80

With Slide. " 5 00

Without Slide. " 4 60

Cable Coil Chains

Inch. 1 1 1½

Per 100 lbs. 7 75 7 50 7 50

Picture Chains.

Light Brass, 3 ft. per doz. \$1 25

Heavy Brass, 3 ft. " 1 75

Safety Chain.

Brass. 5%

Sash Chain. (Morton's)

Steel. per 100 ft.

0. \$2 50

2. 3 10

1. 3 60

Champion Metal.

OR. 5 40

2R. 5 60

1R. 7 75

Champion Metal.—Extra Heavy.

1H. 9 50

Cable Sash Chain.

Steel. List Net Plus 15%

CHALK, CARPENTERS'

Blue. per gross, \$1 50

Red. " 1 50

White. " 1 45

Common White School

Crayon. " 25c

CHARCOAL.

In bags. per bag \$1.70

CHECKS, DOOR.

Blount. Net list

Corbin. "

CHIMNEY TOPS.

Iwan's Volcano. 40%

CHISELS.

Box.

Inches. 12 14

Round, per doz. \$5 25 5 75

Flat, per doz. 7 25 8 25

Cold.

Good quality, ½ in. and larger. per lb. 28c

Smaller size, per doz. Nets

Socket, Firmer.

Ohio. Price on Application

Socket, Framing.

Ohio. Price on Application

Tanged, Firmer.—Barton's.

With handles. Net list

Choppers, See Cutters, Meat.

CHUCKS, DRILL.

Goodell's, for Goodell's Screw Drivers. List less 35-40%

Yankee, for Yankee Screw Drivers. 6 00

CHURNS.

Anti-Bent Wood,

Gal. 5 7 10

Each. \$3 90 4 60 4 85

Belle, Barrel. 6.5&7½%

Common Dash,

Gal. 5 7

Per doz. 17 00 19 00

CLAMPS.

Adjustable.

Martin's. 30%

No. 63, Screw. List price plus 25%

Cabinet.

Screw. List price plus 25%

Carpenters'.

Steel Bar. List price plus 10%

Carriage Makers'.

No. 61, Malleable Iron Screw, List price plus 25%

Quill Frame.

No. 30 Ball and Socket, 2¼" head. per gross \$8 75

No. 50, Ball and Socket, 3½" head. per gross 10 25

Hose.

Sherman's, brass, ½-in., per doz. 48c

Double, brass, ½-in., " 1 20

Saw Filers.

Wentworth's, No. 1, \$12.50; No. 2, \$18.25. No. 3, \$16.25.

CLAWS, TACK.

Wood hdl. No. 10. per doz. \$0 95

Forged steel, wood hdl. \$1 75

Solid steel. " 2 40

Giant. " 50

CLEANERS.

Drain.

Iwan's Adjustable. 40%

Iwan's Stationary. 30%

Pot.

Wire. per doz. \$0 75

Side-Walk.

Steel. per doz., Net prices

CLEAVERS.

Family.

Beatty's, inch 7 8 9 10

Per doz. \$27 00 29 00 33 00 36 00

CLEAVISES.

Malleable. 10c lb.

CLIPPERS.

Bolt. \$2 25&6 00

CLIPS.

Axle.65&5%

Damper.

Standard. per doz. 70c

Troy. 38c

Hame. " 50c

CLOTH.

Emery.

Star. New Prices

B. & A. "

Hardware Wire—

Full rolls (100 ft.) Prices on application

12 Mesh, galvanized. "

14 " " " " " "

16 " " " " " "

18 " " " " " "

Screen Wire. Prices on application.

12 mesh, painted, per 100 sq. ft. "

COLLARS, STOVE PIPE.

Lacquered.

Inches 5 6 7

Fancy pattern, per doz. 80c 85c \$1 15

COMPASSES.

Carpenters' 15%

COPPER—See Metals.

COPPERS—Soldering.

3 lb. and heavier. per lb. 55c

2½ lb. " 56c

2 lb. " 57c

1½ lb. " 58c

1 lb. " 61c

CORD.

Picture.

White Wire. 70&10%

Sash.

Sampson Spot, No. 7, per doz. \$21.25

Revenoc No. 7. per doz. \$14.40

CORKSCREWS.

Walker's. 30%

Williamson's Regular. 35&11½

Williamson's Forged Worm. 40%

COTTERS, SPRING.

All sizes (new list) 80%

COUPLINGS, HOSE.

Brass. per doz. \$2 25

COVERS, WAGON—See Tents.

CRADLES, GRAIN.

Morgan's Grapevine. per doz. \$45 00

CRAYONS—See Chalk. CROWBARS. Pinch or Wedge Point.....per lb. 8c	ELBOWS—Conductor Pipe. Galvanized Steel, Tin and Terne, Round Corrugated.	Wood Pails. Frazer's, 15lb.\$1.00; 25 lb.\$1.50 each Hub Lightning, 15 lb. 90c; 25 lb. \$1.21 each.	HANGERS. Barn Door. U. S. Rolled Bearing.....12½% Matchless.....12½% Warehouse Tandem, No. 44.....33½%
CUTTERS Glass. Woodward.....40%	Size.....Doz. 2-inch.....\$ 3 60 3-inch.....4 32 4-inch.....7 20 5-inch.....15 00 6-inch.....18 00	Tin Cans. Frazer's 1½lb. per doz.....\$1 75 3 lb. per doz.....3 25	Conductor P. Iwan's Perfection.....50%
Meat. Enterprise—Nos. 5 10 12 Each \$2 50 \$4 25 \$3 75 " Nos. 22 32 " 6 50 8 50	Subject to 60% discount.	GRINDSTONES.	Ease Trough. Imperial.....Net list Wire.....List plus 5%
Pipe. Saunders', No. 1 2 3 Each.....\$1 85 2 75 6 75	EMERY, TURKISH. Size.....5-lb Flour.....pkgs. ¼ kegs. kegs. 15c 8c 7½c	Family. Inches.. 7 8 10 12 Per doz..20 50 21 75 26 25 30 50	Garage Door. Right Angle.....50&10% Sliding Folding.....50% Receding.....50%
Slaw and Kraut. 4-knife Kraut.....\$20 00-55 00 3-knife Kraut, 8x27 in. 13 00-18 00 1-knife Slaw.....2 50 2-knife Slaw.....3 00 Washer.....11 00	EYES. Bright Wire Screw—See Ooods, B. W. Drifting Pick60, 10&5%	Loose. Per ton.....Price on application	Parlor Door. Acme.....per set, \$3 75 Ives' Improved....." 3 40 Lane's Standard....." 3 50 Lane's New Model....." 3 10 Le Roy Noiseless.....40&10% Richards.....25% Advance.....40&10%
DAMPERS, STOVE PIPE. Ideal 3".....\$1 00 4".....1 05 5".....1 15 6".....1 25 7".....2 20 8".....3 75 10".....6 00	Hooks and Eyes— Brass, 1½" No. 60.....per gross, \$3 50 Iron " " 50....." 1 60	GUN WADS. (See Ammunition).	HASPS. Hinge, Wrought.....Add 50% to list. With Staples—See Staples.
DIES AND STOCKS. Discount.....New List	FASTENERS, STORM SASH. Shroeder's.....per doz. \$1 50 Sensible....." 3 00	GUNS. Iver Johnson Champion Single Barrel Shot Guns.....Net Prices	HATCHETS. Crescent.....50% Cast Claw.....per doz. \$1 50@1 85 Cast Shingling....." 1 50@1 85 Germantown.....7½%
DIGGERS. Post Hole. Eureka.....per doz. \$14 50 Iwan's Split Handle (Eureka) 4-ft. Handle.....per doz. 14 00 7-ft. " 20 00 Iwan's Perfection (Atlas) " 16 00 Iwan's Hercules pattern " 16 15 See also Augers—Post Hole. Dividers, Wing.....25%	FILES AND RASPS. Delta Delta.....30% Swiss.....List plus 25% Utility....." net.	HAPTS, AWL. Brad. Common.....per doz. \$0 35	HAY KNIVES. HAY RACK BRACKETS Wenzleman's No. 1 per doz. sets, \$18 00 Wenzleman's No. 2 " " 19 20
DOOR CHECKS—See Checks. DOORS, SCREEN. 1-in. 4-panel, painted.....Net Prices 1½-in. 4-panel, painted....." 1½-in. 3-panel, natural pine, fancy....."	Nicholson's— American.....50&2½% Arcade.....50&2½% Black Diamond.....40% Eagle.....50&2½% Great Western.....50&2½% Kearney & Foot.....50&2½% McClellan.....50&2½% Nicholson.....40% J. Barton Smith.....50&2½% X-F Swiss Pattern.....List plus 10%	HAMMERS, HANDLED. per doz., net Blacksmiths, Hand, No. 0, 26 oz. \$11 11 Engineers', No. 1, 26 oz. 11 11 Farriers', No. 6, 7 oz. 7 23 Machinists', No. 1, 7 oz. 6 65	See Knives. HINGES. Clark's Gravity No. 1.....per doz. sets, \$2 25 No. 3....." " 5 75
DOOR HANGERS—See Hangers. DRILLS. Blacksmiths' Twist. (New List)....40% Breast. Millers Falls No. 12.....Each, \$46 00 " " 112....." 26 00	FORKS. Barley. Steel, new list.....New Prices Hay. 2-tine.....New prices 3- ".....New prices 4- ".....New prices Digging.....New prices Scoop.....New prices	Nail. Vanadium, No. 41½, 16 oz., per doz.....\$12 00 V. & B., No. 11½, 16 oz. per doz. 10 00 Garden City, No. 101½, 16 oz., per doz. 9 00 Tinner's Riveting, No. 1, 8 oz., per doz. 8 00 Shoe, Steel, No. 1, 13 oz. per doz. 6 88	Gate. Clark's.....1 2 3 Hgs & Lch, doz. \$5 50 7 00 9 75 Hinges only " 4 75 5 50 8 00 Latches only. 1 90 1 90
Goodell's Automatic. Nos. 01 03 Per doz. 12 00 14 40 Goodell's Single Gear, per doz. 15 75 Goodell-Pratt No. 4½ per doz. list, less.....35-40% Goodell-Pratt No. 379 per doz. list, less.....35-40%	Header. 3-tine.....New prices 4- ".....New prices Manure 4-tine.....New prices	Shoe, Steel, No. 1, 13 oz. per doz. 6 88 Tack. Magnetic. Per doz.....\$5 63	Screen Door. Cast Iron.....gross \$10 00 Steel....." 7 00
Reciprocating. Goodell's.....per doz. 26 00	FREEZERS—ICE CREAM. White Mountain 1-quart.....@ " " 2 ".....@ " " 4 ".....@ " " 6 ".....@ Arctic.....1 ".....@ " " 2 ".....@ " " 4 ".....@ " " 6 ".....@	Hammer. Adze Eye.....per doz. 40 to \$1 00 Blacksmiths'....." 45c@1 00 Machinists'....." 50c@1 00 Hay and Manure Fork.....25%	Spring. Chicago.....Add 12½% to list. Columbia Dbl. Acting.....40&10&5% Gem.....25% Ideal Detachable.....per gro. \$11 00 Matchless.....40% New Idea.....per gro. \$7 20 Oxford.....20%
DRIVERS, SCREW. Standard.....Nets Lock Ferrule....." Champion....." Champion Pattern....." Clark's Interchangeable....." Edison....." Reed's Lightning....." Goodell's Spiral....." Yankee Ratchet....." " Spiral....."	GAUGES. Cream Pail. Fairmount.....per doz. \$3 75 Marking, Mortise, etcNets Wire. Disston's.....25%	HAMMERS, HEAVY. Heavy Hammers and Sledges. Under 5 lbs.....50% 5 lbs. and over.....50&10% Mason's. Single and Double Face.....50%	Wrought Iron. New Lists..... Light Strap Hinges.....15% Heavy Strap Hinges.....25&5% Light T Hinges.....15&5% Heavy T Hinges.....20&5% Extra Heavy T Hinges.....25%
EAVES, TROUGH. 60% off Standard List.	GIMLETS. Discount.....35@40%	HANDLES. Auger. Common Assorted.....per doz. \$0 75 Pratt's Adjustable, Nos. 1 & 2, per doz. 6 00 Ives' Adjustable.....per set, 1 35 Axe.....30%	Screw Hook and Strap. 6 to 12 in.....per 100 lbs. \$7 75 14 to 20 in....." 7 50 22 to 36 in....." 7 25
ELBOWS—Stove Pipe. 1-piece Corrugated, Uniform. Doz. 5-inch.....\$1 40 6-inch.....1 50 7-inch.....1 90	GLUE. Bulk. B Amber.....per lb. 35c A White....." 40c H. S. Amber....." 32c	Chisel. Hickory, Tanged, Firmer, Assorted, 55c; Large, 85c per doz. Hickory, Socket Firmer, Assorted, 70c; Large size, 80c per doz. Coal Pick.....40% Drifting Pick.....40% File, assorted, 30c; Large, 35c per doz.	Screw Hook and Eye. ½ in.....per doz. pair \$2 60 ¾ in....." 3 50 1 in....." 5 00
Uniform, Color Adjustable Doz. 5-inch.....\$1 35 6-inch.....1 45 7-inch.....1 80	Liquid. Army & Navy.....40% Le Page's— List "A".....37½% List "B".....33½% List "C".....25%	Grease. Grease, Axle. Wood Boxes. Frazer's.....per gro. \$13 00 Hub Lightning.....7 50	Garden.....Net Grub. Extra.....New prices Hazel.....per doz. New prices Ladies' and Boys'.....New prices Mortar.....New prices Planter's Eye.....New prices Weed.....New prices
GRINDSTONES.	GREASE, AXLE. Wood Boxes. Frazer's.....per gro. \$13 00 Hub Lightning.....7 50	Hammer. Adze Eye.....per doz. 40 to \$1 00 Blacksmiths'....." 45c@1 00 Machinists'....." 50c@1 00 Hay and Manure Fork.....25%	HOLLOW WARE—See Ware. HOOKS. Awning. No. 60.....per gro. 50% Belt. Brown's.....70&5% Jones'.....65&5%
GRINDSTONES.	GREASE, AXLE. Wood Boxes. Frazer's.....per gro. \$13 00 Hub Lightning.....7 50	Hammer. Adze Eye.....per doz. 40 to \$1 00 Blacksmiths'....." 45c@1 00 Machinists'....." 50c@1 00 Hay and Manure Fork.....25%	Bench. See Stops, Bench.

Box. Inch..... 5 7 10 12 Per doz...\$2 50 2 75 3 25 3 85 Bush. Common Axe Handle, per doz.\$22 00 Chain. Inch. 1 1/4 1 1/2 1 3/4 2 Pr 100 \$7 60-8 10 9 75 11 50 12 60 Clothes Line. Japanned.....per doz.48c @ 1 40 Galvanized....." 75c @ 2 50 Coat and Hat. Common Wire....per gro. 1 25-1 65 Conductor. Iwan's Tinned Sickle.....10% Corn. Common, riveted, painted red.....per doz. Nets Little Giant....." " Gale. See Goods, Bright Wire. Grass. Common Nos. 1 3 5 7 Per doz...\$4 50 3 50 3 75 3 25 Hammock. With plate.....per doz. 1 10 With screw....." 1 00 Lambrequin, or Drapery. per gro...30c Picture.50% @ 50%:10% Potato and Manure.Nets Screw. Brass.....70% (See Goods, Bright Wire.) Seat Spring.per lb. 5 1/2c	Standard. Nos.....1 2 Each.....\$0 60 1 00 R-W Big Lift.....40% Tiger.....40% KETTLES. Brass.....15% Cauldron.....40% Copper.....per lb. 27 Maslin.....40% Sugar.....50% KNIVES. Beet Topping. Clyde, 9-in. Scimitar Blade, dz. \$3 85 California.....3 40 Butcher.....Per doz. Handles, 6" blade.....\$3 25 7".....3 75 Beechwood handles, 9" blade.. 4 50 10".....5 25 Cooper's Hoop.....15% Corn. Clipper.....per doz. \$1 75 Disston's.....2 75 Earle's.....3 00 Woodford.....2 25 Drawing. Standard.....(New List) 15% Adjustable.....15% Barton's Carpenters.....15% Hay. Iwan's Solid Socket.....doz.\$13 00 Heath's.....13 00 Iwan's, Sickle Edge.....15 50 Iwan's, Imp'd Serrated.....15 75 Hedge. Challenge.....per doz. \$6 00 Disston's.....3 75 Mining. Common, Single....." 60 Common, Double....." 90 Streeter, 4-blade....." 1 30 Streeter, 6-blade....." 2 00 Putty. Common.....per doz. \$0 75 @ 1 50 Lander's.....1 75 @ 2 50 Scraping. Beech Handle.....90 @ 1 10 Lander's.....5 50 @ 6 50 KNOB. Mineral.....per doz. \$2 10 Porcelain.....2 20 Jet.....2 20 LADDERS. Common Long.....Per ft.....17c @ 23c Extension. Per ft.....22 to 28 Step. Common, per ft.....23c Common, with Shelf, add 10c. IXL.....34c Challenge, 6 to 9 ft.....55c 10 to 16 ft.....60c LANTERNS. Bull's Eye Police. 3-in. Flash Light...per doz. \$13 00 LEADERS, CATTLE. Nos.....51 52 Per doz.....\$1 35 1 45 LEATHER, LACE. Cut.....50% Sides. Ex. Quality.....per sq. ft. \$0 45 LEATHERS, PUMP. Valve and Plunger.....10% LIFTERS. Stove Cover. Coppered.....per gro. \$3 25 @ 5 50 Alaska.....8 00 Alaska.....10 00 Transom. Payson's.....55% LINES. Chalk. Twisted in 20-ft. hanks. Nos. 4 6 7 8 9 Gro.....Prices on Application Twisted in 50-ft. balls. Nos.....1 2 3 4 Per doz.....Prices on Application Braided in 20-ft. hanks. Nos.....0 1 2 3 Per doz.....Prices on Application Mason's..... Clothes. 60 ft. Jute.....per doz. \$0 95 60-ft. Sisal.....40 50-ft. Cotton.....15 50-ft. Braided Cotton.....25	LINING, STOVE. Bricks.....per crate, 42c LOCKS. Barn Door. No. 60 Stearns.....per doz. \$9 00 No. 80.....7 50 MACHINES. Boring. Without With Augers Augers Angular...per doz. \$3 00 4 40 Upright...2 60 4 00 Riveting. Stearns No. 1.....per doz. \$12 00 Tenoning. No. 50 Peace's Spoke...each \$10 75 MAIL BOXES. See Boxes. MALLETS. Carpenters'. Fibre Head, No. 2, per doz. \$16 50 No. 3.....19 50 No. 4.....28 50 Round Hickory.....\$3 00-5 00 Lignumvitae.....6 25-10 50 Square Hickory.....3 50-5 50 Lignumvitae.....8 00-12 00 Tinners'. Hickory.....2 25 MATS. Door. National Rigid.....50% & 10% & 5% Acme Steel Flexible.....50% Stove. No. 2.....per gro. Nets No. 1....." No. 1 Asbestos Toasters, or wire-covered Stove Mats, with handle.....per doz. 1 10 No. 2 Asbestos Toasters, with ring.....per doz. 60 MATTOCKS. Plumbs.....25% MAULS. Iron, lbs. 10 13 16 18 Per doz.....Prices on Application Wood Face, lbs. 10 12 14 Per doz.....Prices on Application Wood Choppers'. Lake Super'r & Oregon Pat. 40% & 5% MEASURES. Galvanized, doz.....Nets Japanned, doz.....Nets MILLS, COFFEE. Enterprise.....161% Parker.....50% & 5% Arcade.....40-10% MITRE BOXES. See Boxes. MOPS. Cotton. Star (Cut Ends). Pounds 12' 15' 18' 24'-3 oz. Per doz. \$4 50 5 65 6 75 9 00 MOWERS, LAWN. Gladiator—B. B. Inches.....16 18 20 Each.....\$6 50 7 25 8 00 King Universal—B. B. Each.....\$5 25 5 75 6 00 Inches.....14 16 18 Big Giant.....\$3 50 3 90 4 25 Stearns'. No. 1—12 in.....each \$6 75 14 in.....7 00 16 in.....7 25 18 in.....7 50 No. 2—10 in.....7 75 12 in.....8 25 14 in.....8 75 16 in.....9 25 18 in.....10 00 20 in.....10 75 No. 3—10 in.....8 00 12 in.....8 50 14 in.....9 00 16 in.....9 50 18 in.....10 25 20 in.....11 20 NAILS. Cut Steel.....Prices on Application Cut Iron....." Wire. Small Lots...Prices on Application Cement Coated. Small Lots...Prices on Application Horseshoe. Ausable.....55% & 5% Capewell.....15% Perfect.....55% & 5% Putnam.....20% & 5% Star.....30% & 5% Picture. Brass Heads.....25% Brads.....50% & 5% Furniture.....List plus 15%	NAIL PULLERS. See Pullers. NAIL SETS. See Sets. NETTING, POULTRY. Galvanized before weaving...40% & 10% Galvanized after weaving.....40% NIPPERS. End Cutting. Stubb's Pattern, Inches. 5 6 Per dozen.....\$4 65 6 75 End and Diagonal Cutting. Swedish Side. Inches. 5 6 Per dozen.....\$4 50 5 75 Hoof. Heller's.....40% & 10% V. & B.....55% & 5% NOZZLES. Hose. Magic.....per doz. \$9 50 Diamond.....5 75 NUTS, HOT PRESSED. Square Tapped. \$.05 off per 100 lbs. Hexagon Tapped. 85c off per 100 lbs. OILERS Chase Pattern. Brass and Copper.....25-10% Zinc.....35% Engineers'. Tin.....per doz. \$7 00 @ 9 00 Machine. Common.....per doz. \$0 85 OPENERS. Box. See Box Chisels Can. Delmonico.....per doz. \$1 30 Never Slip.....65 Crate. V. & B.....7 25-11 00 OUTFITS, COBBLING Combination.....per doz. \$16 00 Economy.....8 50 Family.....14 50 PAIS. Cream. 14-qt., without gauge, per doz. \$9 50 18-qt., " " " 11 00 20-qt., " " " 11 75 Sap. 10-qt., IC Tin.....per doz. \$4 00 12 " " " 5 50 Stock. Galv'd. qts. 14 16 18 20 Per doz...\$9 75 10 75 12 75 14 50 Water. Galvanized, qts. 10 12 14 Per doz.....\$5 75 6 50 7 25 Wood. Cable, 2-Hoop.....per doz. Nets Cable, 3-Hoop....." Nets Cedar, 3-Hoop, brass.. " Nets PANS. Dripping.Net Fry. Common.....Nets Acme....." Roasting. Paxton. 1 2 3 4 Per doz.....Nets Neverburn....." Savory No. 200.....per doz. \$8 40 PAPER. Building. Plain.....per 100 lbs. \$1 10 Tarred....." 1 10 Tarred Felt....." 1 10 Red Rosin, 20-lb.....per roll 72c Red Rosin, 25-lb.....90c Red Rosin, 30-lb.....\$1 08 Sand and Emery. No. 1, per ream, best grade... \$5 40 No. 1, per ream, cheaper grade. 4 85 Wrapping. Express.....100 lbs. Nets
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PARERS.	TINNERS.	PUNCHES.	SAWS.
Apple.	Hollow.....Net list	Conductors.	Bond.
Goodell's.....per doz. \$10 80	Solid.....each, 10c	No. 22.....per doz. \$3 00	E. C. Atkins & Co. Prices on applic'n
Turntable....." 11 40		Machine.....per lb. 25	Butch.
White Mountain....." 8 40	PLUMBS AND LEVELS.	Saddlers.	Disston's.....New nets
Reading, No. 78....." 11 40	Common.....Nets	Common.....per doz. 1 50 to 5 00	Jackson's.....New nets
Potato.	Cook's.....40%		Butchers.
Goodsell's Saratoga, 10 1/2 in., dz. 6 50	Davis' Iron.....25%		E. C. Atkins & Co. Prices on applic'n
Goodsell's Saratoga, 5 in., dz. 5 50	Davis' Inclimeter.....15%		Disston's.....New nets
	POINTERS, SPOKE.	PUTTY.	Circular.
PICKS.	Stearns' No. 1.....per doz. \$7 25	Strictly pure.....per 100 lbs. \$4 25	E. C. Atkins & Co. Prices on applic'n
Adze Eye Ore.....22 1/2%	No. 2....." 9 25		Disston's.....New nets
Drifting and Poll Picks.....22 1/2%	POKERS, STOVE.	RAIL.	Hiles'.....New nets
Plumbs, Railroad.....22 1/2%	Wr't Steel, str't or bent per doz. \$0 75	Barn Door.	Simonds'.....New nets
Surface.....22 1/2%	Nickel Plated, coil hant's " 1 10	Matchless, 1-in.....5c	
	POLISH.	Matchless, 1 1/2-in.....7c	Compass.
PINCERS.	Burnshine.	Storm King.....5c	E. C. Atkins & Co. Prices on applic'n
Carpenters', cast steel.	1-pint.....doz. \$1 10	Sliding Door.	Common.....New nets
Inches.....6 8 10 12	1-pint....." 1 50	Bronzed wrought iron...per ft. 8 1/2c	Disston's.....New nets
Per doz. \$3 75 4 75 6 25 7 00	1-quart....." 5 00		Simonds'.....New nets
Blacksmiths'.....45%	1-gal....." 9 00	RAKES.	Cross-Cut.
Heller's.....40%	1-gal....." 15 00	Per doz.	E. C. Atkins & Co. Prices on applic'n
	Metal.	Garden.	Disston's.....New nets
PINS.	Wizard, 6 oz.....per gross \$17 40	Steel, Bow, 12-inch Teeth....\$8 50	Simonds'.....New nets
Clothes.	" 1 pt....." 19 20	Steel, Bow, 14-inch.....9 25	
Common.....per box of 5 gro. \$0 95	" 1 qt....." doz. 5 40	Malleable Iron, 12-in. " 4 75	Dehorning.
	" 1 gal....." 9 60	Malleable Iron, 14-in. " 5 00	Disston's.....New nets
Picket	" 1 gal....." 15 00	Hay.	Star.....New nets
Fluted, 15-in.....per doz. \$1 10	Stove.	Wood, 10 Teeth.....\$4 00	Hand and Rip.
Fluted, 21-in....." 1 60	Black Eagle Paste, 1-lb. cans,	Lawn.	E. C. Atkins & Co. Prices on applic'n
Spiral....." 1 90	per gross.....\$30 00	20 Teeth.....per doz. \$5 50	Disston's No. 7.....New nets
	Black Eagle Paste, 5-lb. cans,	RASPS—See Files.	Disston's Nos. 8, D8, 12, 76, 112,
PIPE.	per case.....4 90	RAZORS—SAFETY.	D100, and 120.....New nets
Conductor.	Black Jack Paste, #10, 8 oz.,	Gillette.....per doz. \$45 00	Keystone.....New nets
Standard Gauge Conductor Pipe,	per gross.....11 40	Auto Strip....." 45 00	
plain or corrugated.	Black Eagle Liquid, 6 oz.,	Gem....." 8 40	Miter Box.
	per gross.....13 20	Geni (3 doz. lots)....." 8 00	E. C. Atkins & Co. Prices on applic'n
Not Nested.....45&5% off	FIRE POTS.	Ever Ready....." 8 40	Narrow Band.
Nested solid.....50% off	Clayton & Lambert's, each \$4 00@6 00	Ever Ready (3 doz. lots) " 8 00	Simonds'.....New nets
	Gate City.....each, 6 25	RAZOR STROPS.	Panel.
L. C. L. to Dealers:—	Gem.....each, \$6 75@8 50	Star (ifoning).....30%	E. C. Atkins & Co. Prices on applic'n
Terms 60 days; 2% Cash 10 days.	POWDER.	REGISTERS.	Disston's No. 7.....New nets
Factory shipments generally delivered.	See Ammunition.	Japanned, Bronzed and Plated.....40%	Pruning.
Stove.	PRESSES, FRUIT AND JELLY.	Solid Brass or Bronze Metal..Net	Disston's.....New nets
29-Gauge, 3-inch.....\$15 50	Enterprise Manufacturing Co....25%	list plus.....Prices on application	Simonds'.....New nets
" 4-inch.....16 50	PRIMERS.	Baseboard.....40%	Rift.
" 5-inch.....17 70	See Ammunition.	REGISTER FACES.	Simonds'.....New nets
" 6-inch.....18 75	PRUNERS.	Japanned, Bronzed and Plated.	Wood.
" 7-inch.....21 20	Disston's Pole.....per doz. \$18 00	4x6 to 14x14.....40%	E. C. Atkins & Co. Prices on applic'n
T-Joint, Made-up.	Water's Improved.....60%	14x14 to 38x42.....60%	Common.....New nets
6-inch.....per 100 \$31 00	PULLERS.	REVOLVERS.	Clover leaf.....New nets
Furnace Pipe.	Cork.	Iver Johnson Safety Automatic	
Double Wall Pipe and Fittings 33 1/2%	Daisy.....each, \$3 10	Hammer.....New Nets	SAW BUCKS—See Bucks.
Single Wall Pipe, Round Pipe	Phoenix....." 1 40	Hammerless....."	SAW SETS—See Sets
Fittings.....33 1/2%	Quick and Easy....." 2 70	I. J. Model 1900....."	SAW TOOLS—See Tools.
Galvan'd and Black Iron Pipe,	Nail.	RINGS AND RINGERS.	SAW FRAMES.
Shoes, etc.....30%	Giant.....per doz. 14 50	Bull.	Common, plain.....per doz. \$1 50
	Never-Slip....." 17 00	Copper.....2 1/2-in. 3-in.	Common painted....." 2 10
PLANES.	PULLEYS.	Per doz.....\$2 75 \$3 25	SCALES.
Stanley Iron Bench.....net	Awning—Jap'd.....10%	Rea's Improved Self-	Counter.
	Clothes Line.....10%	Piercing copper, doz. 3 40	Pelouze.....40&10%
PLATES, TIN.	Hay Fork.	Steel, per doz.....1 50 1 80	SCISSORS.
See Metals in Column 1.	Iron Wheel, 5-in.....per doz. 2 50	Hog.	Star.....60%
PLIERS.	Wood Wheel, 6-in.....2 65	Blair's Rings.....per doz. \$ 75	SCOOPS.
Giant, Button's—Nets	Wood Wheel, 6-in., pass knot,	Blair's Ringers....." 1 00	1/2 bu. "Hercules".....per doz. 3 70
Cutting.per doz. 3 00	Brown's Rings....." 72	1-bu. "Hercules"....." 5 00
Bernard's.....New Prices	Sash.	Brown's Ringers....." 1 00	SCRAPERS.
Lodi.....New Prices	Common.....Net	Hill's Ringers....." 1 00	Box.
Paragon.....New Prices	Common-Sense, 2-in.....Net	Hill's Ring, boxes....." 72	Triangular, No. 6.....per doz. \$6 25
Fencing.	Empire Pattern, 2-in.....Net	Major Rings....." 60	Cabinet.
Black Bull.....All Nets	Ideal.....Net	Perfect Rings....." 1 50	Stearns' No. 8.....per doz. \$10 00
Farmers' Choice.....All Nets	Steel.....Net	Wolverine Rings....." 1 65	No. 9, Ball and
Russell's.....All Nets	PUMPS.	Wolverine Ringers....." 1 10	Socket.....per doz. 11 25
Flat and Round Nose.	Pitcher Spout.	RIVETS.	Floor.
Bernard's.....New Prices	Nos. 1 2 3 4	Copper Belt.....Add 15% to list	No. 10, Stearns'.....each \$13 50
Lodi.....New Prices	Each.....Nets	Coppered Iron.....30%	Road.
Paragon.....New Prices	Spray.	Tinners'.....30%	Cubic ft. 7 5 3
Gas.—Inches 7 8 10 12 14	Midget Junior.....per doz. 3 75	Hame.....per lb. \$0 17	With runners, ea. \$7 00 6 50 6 20
Per doz. 5 00 5 50 7 00 8 00 10 00	New Misty....." 6 00	Slotted Clinch.....per doz. 60c@1 10	SCREEN DOOR HINGES.
	Crescent....." 6 50	Tubular.	Cast iron.....gross, \$13 00
		Nos. 1 and 2 assorted sizes, 50	Steel....." 9 50
		in box.....doz. 75c	
		Nos. 1 and 2 assorted sizes, 10	SCREWS.
		in box.....doz. 1 40	Bench.
		RIVET SETS.	Iron, ins. 1 1 1/2 1 3/4
		See Sets.	\$9 75 11 50 13 75 21 50
		ROPE.	Wood, white maple...per doz. 6 00
		Cotton.	Hand—Wood.....35%
		1/2, 5-16 in. Com. on reels, per lb. Market	Hand Rail.....22 1/2%
		1/2, 5-16 in. Com. in coils. " Price	Jack.....30-35%
		Sisal.	Lag or Coach—all sizes, gimlet
		1st Quality.....23 1/2c	pointed.....50-10%
		No. 2.....20 1/2c	Saw—Centennial.
		Pure Manila.	Nos. 1 2 3 4
		1st quality, base.....per lb. 27 1/2c	Per doz.....47c 55c 75c 90c
		Hardware Grade.....26 1/2c	Wood.
		RULES.	F. H. Bright.....70-10-10%
		Hickory Board.....20%	R. H. Blued.....65-10-10%
		Log.....20%	P. H. Jap'd.....62-10-5%
			P. H. Brass.....42-10-5%
			R. H. Brass.....40-10-5%
			R. H. Nickel Plated.....57-10%
			SCYTHES.
			Clipper, grass.....per doz. \$13 50
			Honest Dutchman....." 13 70

SETS.

Nail.

Square head.....per doz.

Cup point, knurled.....

Rivet.

Farmers'.....per doz.

Tinners'.....

Saw.

Aiken's Pattern.....per doz.

Diston's Monarch.....

Diston's X-Cut.....

Leach's.....

Nash's Hand.....

Nash's X-Cut.....

Stillman's Lever.....

Stillman's X-Cut.....

Morrill's H'd No. 100.....

"X-cut, No. 103.....

"No. 104.....

Whiting Pattern, No. 21.....

Eccentric Anvil, Hand, No. 395, N. P. Morrill Pattern,.....per doz.

Holt's Hand, No. 105, N. P. Morrill Pattern.....per doz.

SHARPENERS, SKATE.

Diamond.....per doz.

Perfect.....

SHAVES, SPOKE.

Stearns' No. 1.....per doz.

"No. 2.....

"Nos. 3, 4, 5, 6.....

"Nos. 7, 8.....

"No. 9.....

SHEARS.

Buckeye, No. 1.....per doz.

Buckeye, No. 2.....

California Pat., 9-in.....

California Pat., 10-in.....

Draw Cut, No. 3.....

Draw Cut, No. 4.....

Henry's Pat 0.....

Per doz.....\$1 40 2 10 2 90 2 80

Star.....per doz.

Sheep—No. BBA.....

Inches.....6 6 1/2 7

Reg. Grip.....\$11 25 11 50 12 00

Nar. Grip, doz. 11 00 11 25 12 25

Star.....60%

Tinners'—See Snips.

SHEAVES, SLIDING DOOR.

Common.....3 4 5

Inches.....\$1 40 1 75 2 40

Half field's.....

Per set.....\$1 80 2 10 2 75 4 25

SHELLS—See Ammunition.

SHELLERS, CORN.

Union.....per doz.

SHIELDS.

Expansion Bolt Shields.....60%

SHOES.

Conductor.....60%

SHOT—See Ammunition.

SHOVELS AND SPADES.

No. 2, Woodford.....per doz.

No. 182.....

Ames', new list.....Discount, 12 1/2%

Neverbreak, hollow bck, blk.....Nets

National.....

Buckeye.....

Mohawk.....

Bar Drain & Ditching

Iwan's Perfection.....\$30 00

Railroad, etc.

Black Diamond.....per doz.

Crescent.....

Keystone.....

Star.....

Hollow Back.....

Ames', new list.....Discount, 12 1/2%

Snow.

Galvanized, with wood han-

dle, No. 56.....\$1 45

No. 55.....1 55

Alaska Steel.....per doz.

D-Handle.....

Long Handle.....

SINKS.

Cast Iron.

Painted, 16x24.....Net

Enameled, White, 16x24.....

Wrought Steel.

Painted, 16x24.....

SLIDGES—See Hammers.

SNAPS, HARNESS.

Covered Spring.....Add 30%

Judd's Pattern.....Add 33 1/3% to list

SNATHS.

Double Ring, Bush.....per doz.

Patent Loop, Bush.....

Patent Loop, Grass.....

SNIPS, TINNERS'.

Clover Leaf.....40&10%

National.....40&10%

Star.....50%

SOLDER—See Metals.

SPRINGS, DOOR.

Nos. 2 3 4 5 6 7

Per doz. 55c 60c 65c 75c 90c 1 00

Reliance.

Light Medium Heavy

Per doz. \$1 55 2 10 3 20

Torrey's.....per doz.

SPRINKLERS, LAWN.

Stearns' No. 1.....per doz.

SQUARES.

Steel and Iron Nets new list

(Add, for bluing, \$3.00 per doz., net.)

Mitre.....Nets

Try.....

Try and Bevel.....

Try and Miter.....

Fox's.....per doz.

Winterbottom's.....10%

SQUEEZERS, LEMON.

Common Wood.....per doz.

Porcelain Lined, Wood.....

Boss, malleable iron.....

Iron frame, porc'n bowl.....

Iron Frame, glass bowl.....

Little Giant, tin'd iron.....

Drum, japanned.....

Drum, nickel plated.....

STAPLES.

Blind.

Barbed.....per lb.

Butler Tub.....16@19c

Fence—

Polished.....per 100 lbs.

Galvanized.....6 15

Netting.

Galvanized.....per 100 lbs.

Wrought.

Wrought Staples, Hasps and

Staples, Hasps, Hooks and

Staples, and Hooks and

Staples.....50&10%

Extra heavy.....35%

STEELYARD.

Discount 25%.

STONES.

Axe.

Hindustan.....per lb.

More Grit.....New Nets

Washita.....

Emery.

No. 126.....per doz.

Oil—Mounted.

Arkansas Hard No. 7.....per doz.

Arkansas Soft.....

Washita No. 717.....

Oil—Unmounted.

Arkansas Hard.....per lb.

Arkansas Soft.....

Lily White.....

Queer Creek.....

Washita.....

Scythe.

Black Diamond.....per gro.

Crescent.....

Green Mountain.....

LaMoille.....

Extra Quinnebog.....

Red End.....

STOPS, BENCH.

No. 10 Morrill pattern, per doz.

No. 11 Stearns.....

No. 15 Smith.....

STOPPERS, FLUE.

Common.....per doz.

Gem, flat, No. 3.....

Gem, No. 1.....

STOVE PIPE—See pipe.

STOVE BOARDS—See Boards.

STOVE POLISH—See Polish.

STRAPS.

Skate.....per doz.

STRETCHERS.

Carpet.

Bullard's.....per doz.

Excelsior.....

Malleable Iron.....

Perfection.....

King.....

Wire.

O. S. Elwood, No. 1.....per doz.

O. S. Elwood, No. 2.....

SWIVELS.

Malleable Iron.....per lb.

Wrought Steel.....per gro.

TACKS.

Bill Posters' 6-oz., 25 lb. boxes,

per lb.....17 1/2c

Upholsters' 6-oz., 25-lb. boxes,

per lb.....18c

TAPES, MEASURING.

Asses' Skin.....List Net

Lufkin's Steel.....

Lufkin's Metallic List to list plus 20%

Lufkin's Pocket.....10%

THERMOMETERS.

Tin Case.....per doz.

Wood Back.....\$2 00@

Glass.....12 00

TIES.

Bale.

Single Loop, carload lots.....75&7%

"less than car lots 70&15%

Cow—See "Chains."

TOOLS, SAW.

Diston's Universal.....40%

TRAPS.

Mole.

Reddick's.....per doz.

Game with Chains.

Victor No. 1.....\$1 65

Oneida Jump No. 1.....2 25

Newhouse No. 1.....3 85

Mouse and Rat.

Net per gross

Out O'Sight Mouse.....\$ 8 00

"Rat.....15 00

"Mole.....100 00

#44 Pocket Gopher.....20 00

Victor Mouse.....2 60

Hold Fast Mouse.....2 60

Victor Rat.....11 00

Hold Fast Rat.....11 00

Official Rat.....13 50

Wood Choker Mouse, 4 Holes 11 00

TROWELS.

Brick.

Clover Leaf.....30%

Brade's.....15&5%

Diston's.....30%

Rose's.....Net

Plasterers'.

Clover Leaf.....40%

Diston's.....25%

W. & McP.....Net

TRUCKS.

Bag.....each, \$3 75

Warehouse or store.

No.....1 2 3

Half Ironed.....\$5 00 6 50 9 40

Full Ironed.....5 75 7 50 11 00

TUBS, WASH.

Standard, Wood.

Nos.....3 2 1 large

Per doz.....\$9 50 11 25 12 75 15 50

Galvanized.

No.....1 2 3

Per doz.....15 20 13 25 20 00

TWINE.

Market

Quotation

3-ply Cotton Wrapping.....4

"Extra Wrapping.....4

"Hyv. Wrapping.....4

"Wrapping on tubes.....3

"cones.....4

India Hemp, 1-lb. balls, No. 18.....2-ply Jute, 1-lb. balls.....

Seins.

Soft.....per lb.

Med.....

Hard.....

Staging, 1-lb. ball, size 21.....

"24.....

"27.....

Bagging, 1-lb ball.....

3-ply, "B" in hanks.....

4- " " " " " " " " " "

3- " " " " " " " " " "

3- " Silver Finish, in hanks.....

Fodder or Lath.

130 strand.....

VICES.

No. 21, Hand.....\$4 50

Oval Slide.

Inches 2 2 1/2 3 3 1/2 4 1/2

Each \$2.00 \$2.25 \$2.55 \$4.10 \$7.00

No. 0, Stearns' Saw, common

pattern.....per doz.

No. 3, Stearns' Saw, common

pattern.....per doz.

No. 4, Stearns' Saw, common

pattern.....per doz.

No. 5, Stearns' Saw, Ball and

Socket pattern.....per doz.

No. 1, Genuine Wentworth,

Noiseless Saw.....per doz.

No. 2, Genuine Wentworth,

Noiseless Saw.....per doz.

No. 3, Genuine Wentworth,

Noiseless Saw.....per doz.

No. 500, All Steel Folding Saw

per doz.....10 50

WIRE.

Brass.

In coils.....Nets

In 1-lb. spools, new list.....Nets

Broom—Tinned.....Nets

Cable—Same price as Barbed Wire.

Copper.

In coils.....Nets

In 1-lb. spools, new list.....Nets

Fence—Smooth. An'cal'd Galv'd

Nos. 6 to 9, less than

car, per 100 lbs.....\$4 25 \$4 95

Hair—New List.....40&10%

Market.

Market Quotations

Bright, full bdl's.....

Bright, broken bdl's.....

Coppered, full bdl's.....

Coppered, broken bdl's.....

Tinned, full bdl's.....

Tinned, broken bdl's.....

Picture—In coils.....80% @ 80&10%

In 5-lb. spools.....per lb.....26c

WRENCHES.

Acme Standard.....50&10%

Alligator No. 1.....90c net

Always Ready.....30%

Agricultural.....50&5%

Ellis Adjustable.....25%

Malleable "S".....per lb.....08c

Malleable "B".....08c

Stillson Pipe.....60%

Bemis & Call's:

Adjustable S, 15%; Adjustable S

Pipe, 15%; Briggs' Pattern, 10%

Combination Bright.....20%

Steel Handle Nut.....20%

Combination Black.....20%

Merrick Pattern.....20%

Knife Handle Pattern.

No. 62, Screw Wrench List, plus 5%

No. 60, Steel Handle.....

WRINGERS.

No. 790, Guarantee.....per doz.

No. 770, Bicycle.....

No. 110, Domestic.....

No. 110, Brighton.....

No. 740, Bicycle.....

No. 22, Domestic.....

No. 22, Pioneer.....

No. 770B, Bicycle.....

No. 781B Guarantee.....

WARE.

Stone Hollow Ware.

Plain or Unground.....50%

Ground Ware.....4%

Enameled Ware.....33 1/3%

Scotch Bowls.....60&5%

Country Hollow Ware, per 100 lbs.\$3 00

White Enameled Ware.

Maslin Kettles.....50%

Neverbreak Flat and Round

Bottom Kettles.....45%

Covered Ware

Tin'd and Turn'd.....35&10%

Enameled.....45&10%

Glue Pots.

Tinned.....Add 15% to list

Enameled.....30%

Enameled.

Cherry Blossom and Chrysolite.50%

WASH BOARDS—See Boards.

WASHERS.

Standard O. G. cast iron...per lb.

Wrought steel in 5-lb. boxes, per lb.:

In.3/16 1/2 5/16 3/4 1 1 1/4 1 1/2 1 3/4 1 1/2 1 1/4 1 1/

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New Britain, Conn.

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Brass and Copper.

Hussey & Co., C. G.,
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Milwaukee Corrugating Co.,
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Whitaker-Glessner Co.,
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Waterloo, Iowa.

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Lamneck & Co., W. E.,
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Furnaces—Soldering.

Clayton & Lambert Mfg. Co.,
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Grates—Camp.

Union Steel Products Co.,
Albion, Mich.

Handles—Boiler.

Berger Bros. Co., Philadelphia, Pa.

Heaters—School Room.

Haynes-Langenberg Mfg. Co.,
St. Louis, Mo.

Heaters—Warm Air.

American Furnace Co.,
St. Louis, Mo.

Art Stove Co., Detroit, Mich.

Haynes-Langenberg Mfg. Co.,
St. Louis, Mo.

Henry-Miller Foundry Co.,
Cleveland, Ohio.

Hess-Snyder Co., Massillon, Ohio.

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Scheible-Moncrief Heater Co.,
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Friedley-Voshardt Co.,
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Cleveland Castings Pattern Co.,
Cleveland, Ohio.

Quincy Pattern Co., Quincy, Ill.

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Pipe—Conductor.

Berger Bros. Co., Philadelphia, Pa.

Clark-Smith Hdw. Co., Peoria, Ill.

Friedley-Voshardt Co.,
Chicago, Ill.

Hussey & Co., C. G.,
Pittsburgh, Pa.

Milwaukee Corrugating Co.,
Milwaukee, Wis.

Pipe and Fittings—Furnace.

Henry-Miller Foundry Co.,
Cleveland, Ohio.

Michigan Safety Furnace Pipe
Co., Detroit, Mich.

Stearns Register Co., Detroit, Mich.

Pipe and Fittings—Stove.

Hemp & Co., St. Louis, Mo.

Michigan Safety Furnace Pipe
Co., Detroit, Mich.

Sullivan-Geiger Co.,
Indianapolis, Ind.

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Polish—Metal.
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Union Steel Products Co.,
Albion, Mich.

Racks—Stove.
Union Steel Products Co.,
Albion, Mich.

Ranges—Combination Gas and Coal.
Ringin Stove Co., St. Louis, Mo.

Ranges—Gas.
Ringin Stove Co., St. Louis, Mo.

Rasps.
Delta File Works, Philadelphia, Pa.
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Registers—Warm Air.
Hart & Cooley Co.,
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Roofing—Iron and Steel.
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Rubbish—Burners.
Hart & Cooley Co.,
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Rules.
Lufkin Rule Co., Saginaw, Mich.

School—Sheet Metal Pattern Drafting.
National School of Sheet Metal
Pattern Drafting, St. Louis, Mo.

Screens—Perforated Metal.
Harrington & King Perforating
Co., Chicago, Ill.

Screw Drivers.
North Bros. Mfg. Co.,
Philadelphia, Pa.

Sheets—Black and Galvanized.
American Sheet & Tin Plate Co.,
Pittsburgh, Pa.
Dearborn Steel & Iron Co.,
Chicago, Ill.
Inland Steel Co., Chicago, Ill.
Sykes Co., The, Chicago, Ill.
Whitaker-Glessner Co.,
Wheeling, W. Va.

Sheets—Planished.
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Shotguns.
Johnson's Arms & Cycle Wks.,
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Diener Mfg. Co., G. W.,
Chicago, Ill.

Solder.
Allen Co., Inc., L. B., Chicago, Ill.

Soldering Iron—Self Heating.
Allen Co., Inc., L. B., Chicago, Ill.

Specialties—Hardware.
Corbin Screw Corporation,
New Britain, Conn.
Delta File Works, Philadelphia, Pa.
Diener Mfg. Co., G. W.,
Chicago, Ill.
Heller Bros. Co., Newark, N. J.
Lufkin Rule Co., Saginaw, Mich.
North Bros. Mfg. Co.,
Philadelphia, Pa.

Specialties—Tin and Sheet Metal.
Curfman Mfg. Co., F. L.,
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Speedometers—Bicycle.
Corbin Screw Corporation,
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Statuary.
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Sticks—Soldering.
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Stoves—Oil and Gasoline.
Ringin Stove Co., St. Louis, Mo.

Stoves and Ranges.
Art Stove Co., Detroit, Mich.
Ringin Stove Co., St. Louis, Mo.

Stove Pipe Reducer.
Sullivan-Geiger Co.,
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Tacks, Staples, Spikes.
American Steel & Wire Co.,
Chicago-New York.

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Lufkin Rule Co., Saginaw, Mich.

Tiles and Shingles—Metal.
Milwaukee Corrugating Co.,
Milwaukee, Wis.

Tin—Perforated.
Harrington & King Perforating
Co., Chicago, Ill.

Tinplate.
American Sheet & Tin Plate Co.,
Pittsburgh, Pa.

Tools—Auto Repair.
Curfman Mfg. Co., F. L.,
Maryville, Mo.

Tools—Carpenters'.
Lufkin Rule Co., Saginaw, Mich.
North Bros. Mfg. Co.,
Philadelphia, Pa.

Tools—Sheet Metal.
Bertsch & Co.,
Cambridge City, Ind.
Dreis & Krump Mfg. Co.,
Chicago, Ill.
Niagara Machine & Tool Works,
Buffalo, N. Y.
Tanner & Co., Indianapolis, Ind.

Tools—Tinsmiths'.
Bertsch & Co.,
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Chicago, Ill.
Niagara Machine & Tool Works,
Buffalo, N. Y.
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Torches—Gasoline.
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Detroit, Mich.
Diener Mfg. Co., G. W.,
Chicago, Ill.

Transit Companies.
Cleveland & Buffalo Transit Co.,
Cleveland, Ohio.

Trough—Eaves.
Berger Bros. Co., Philadelphia, Pa.
Friedley-Voshardt Co.,
Chicago, Ill.
Milwaukee Corrugating Co.,
Milwaukee, Wis.
Whitaker-Glessner Co.,
Wheeling, W. Va.

Ventilators.
Berger Bros. Co., Philadelphia, Pa.
Friedley-Voshardt Co.,
Chicago, Ill.
Standard Ventilator Co.,
Lewisburg, Pa.

Ventilators—Ceiling.
Hart & Cooley Co.,
New Britain, Conn.

Vines.
North Bros. Mfg. Co.,
Philadelphia, Pa.

Wood Faces.
Dover Wood Face & Lbr. Co.,
Dover, Ohio.

¶ ADVERTISING is the power of an idea multiplied.

¶ Other powers lose by expansion. Steam is power only when confined. Electricity radiated and diffused becomes nothing. Sound dies with distance. Great suns pale into invisible stars, and the power of light itself is lost in infinite space. But the strange power of advertising increases by expansion. Diffusion is its life. It grows by what it imparts.

¶ The advertised idea, to become a power, must be genuine, vital, and related to the function of a meritorious business; and the means of its furtherance must be well chosen.

¶ To choose well the means for the furtherance of your advertised idea, in order that it may become a power, in order that you may show its genuineness as a vital factor of your business, is not hard.

¶ A close perusal from cover to cover of this week's issue of AMERICAN ARTISAN AND HARDWARE RECORD will disclose abundant evidence of this fact.

WANTS AND SALES

For paid yearly subscribers, **AMERICAN ARTISAN AND HARDWARE RECORD** will insert under this head advertisements of not more than fifty words **WITHOUT CHARGE**. Employers wishing to secure employees, parties desiring to purchase or sell business, secure partners or to exchange, etc., will find that these pages offer excellent opportunities to satisfy their wants. Clerks and tinsmiths looking for situations will find it to their advantage to use these columns. Those who respond to these announcements please mention that they "READ THE ADVERTISEMENT IN AMERICAN ARTISAN AND HARDWARE RECORD."

BUSINESS CHANCES

Wanted—Agents Sideline—Easy seller. "Folding Pocket Tweezer." Liberal commission. Write to The Ideal Manufacturing Company, Hartford, Wisconsin. 16-3t

Wanted—Warren store fixtures; also set of tinner's tools. Must be in good condition. Give full particulars and price. Kindly address replies to A-84, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Boulevard, Chicago, Illinois. 16-3t

For Sale—One McCaskey Total Account System. Never been used. Will sell it for \$25.00. Will box it up and prepay express charges within any reasonable distance. A great bargain. J. R. Sweet, 1123 Central Avenue, Wilmette, Illinois. 16-3t

Wanted—Partner for the manufacture and sale of one of the greatest inventions of the XXth Century. "The Economy Heat Generator and Fuel Saver." Has been introduced 5 years; or will sell the exclusive right for State of South Dakota. W. N. Moore, Sioux Falls, South Dakota. 17-3t

For Sale—Hardware store doing an excellent business in a live Nebraska town of about 10,000 population. Reason for selling, party controlling wishes to enter into contracting. Please address A-90, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Boulevard, Chicago, Illinois. 17-3t

For Sale—Sheet metal shop in the best town in the northwest, located in the heart of the city, doing a good business. Reason for selling, owner must leave on account of wife's health. If you are looking for a shop in a first-class location this is a snap. Investigate. Address A-88, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Boulevard, Chicago, Illinois. 17-4t

For Sale—Plumbing, Heating Shop. Best growing seat in Montana. Outside competition 70 miles away. Must be sold on account of ill health. Year's volume, \$48,000. Profits big. Stock, \$8,500. Building, \$1,500; lot, \$4,500; terms cash. Unless you have the money please do not write. Kindly address your replies to A180, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Boulevard, Chicago, Illinois. 16-3t

For Sale—Plumbing and sheet metal shop in metropolis of southeastern Kentucky, located junction of Kentucky, Virginia to Tennessee, in one of the best and largest coal fields in the United States. New and fast being developed, and also tributary to fine farming and stock country. City and tributary country with almost unlimited business. City has splendid water works—gets pure and healthy water from beautiful mountain lake. To anyone interested I will be glad to give any further information they may desire. W. L. Salyers, Middlesboro, Kentucky. 13-4t

HELP WANTED

Wanted—Good Tinner-Plumber at once. Write or wire. Karl R. Kokborg, Richland Center, Wisconsin. 16-3t

HELP WANTED

Wanted at Once—Experienced hardware clerk. Address Porter-Hurlbert Hardware Company, Frankfort, Indiana. 15-3t

Wanted—Sheet metal, tinner and furnace man. State wages expected in first letter. E. A. Schmidt, Grand Rapids, Wisconsin. 17-3t

Wanted at Once—A reliable plumbing and heating man. Steady job for right man. Good wages. R. G. Schumacher, Menno, South Dakota. 15-3t

Wanted at Once—Tinner and furnace man. Permanent position to the right man. Porter-Hurlbert Hardware Company, Frankfort, Indiana. 15-3t

Wanted—First-class tinner and furnace man. Good wages and steady job for the right man. Lee Whitney and Company, 113 East Avenue, Elyria, Ohio. 17-3t

Wanted—Energetic Hardware Clerk who wants to better himself. An opportunity for promotion. Wolff, Kubly and Hirsig Company, Madison, Wisconsin. 17-3t

Wanted—All around tinner and furnace man. Steady employment for good man. Union scale will be paid. Address Cherokee Sheet Metal Works, Cherokee, Iowa. 16-3t

Wanted—Tinner. Steady employment, one capable of drafting patterns, warm air heating and plumbing. C. C. Bruscke and Son, Good Thunder, Minnesota. 16-3t

Wanted at Once—A good all around tinner and furnace man, one who is able to do some country plumbing. Steady job and good wages. Treckers and Phillips, Odell, Illinois. 8-ufn

Wanted—Tinner on job work—cornice, skylight and ventilation work. Open shop. Steady work. Bjornson Sheet Metal Works, 218-20-22 North 15th Street, Omaha, Nebraska. 16-3t

Wanted—Good reliable tinner who can do general shop and furnace work. Must be sober and industrious. Steady work. Newman Hardware and Stove Company, Columbia, Missouri. 16-3t

Wanted—An all around tinner, plumber and pump man. Steady employment the year around. \$25.00 per week. Good town. Leonard Hardware Company, Blanchardville, Wisconsin. 15-3t

Wanted—Tinner and sheet metal worker. Steady the year around to right man. Address A-74, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Boulevard, Chicago, Illinois. 15-3t

Wanted at Once—A first-class tinner and plumber. Steady work for a good man at \$24.00 per week, 9-hour day. State age and experience. Chas. A. Changnon, 130 West Main Street, Montpelier, Ohio. 17-3t

Wanted—An all around plumber and tinner who can do hot air, steam and hot water heating. Steady employment the year around. Give full particulars and wages wanted in first letter. Box 4, Lexington, Illinois. 17-3t

Wanted—All around tinner and plumber; one who can also do hot air, steam and hot water heating. Steady employment the year around. State full particulars about yourself and wages expected in first letter. Cambridge Hardware Company, Cambridge, Wisconsin. 15-3t

Wanted—Practical sheet metal worker with 18 years' experience in all branches of the trade desires steady job in South or Southwest. Not less than \$35.00 for 44-hour week. Can come any time. Address A-89, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Boulevard, Chicago, Illinois. 17-3t

Wanted—In central Montana, plumber who can do some sheet metal work. Must be an A-1 mechanic in the plumbing and heating line. Will pay six dollars per day of eight hours. Kindly address A-87, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Boulevard, Chicago, Illinois. 17-3t

Wanted at Once—A good live hardware clerk, one who will put stock in order and have a place for everything and keep everything in that place; also check out invoices and mark the goods. Must be a good salesman. Town of 5,000, situated in a very rich farming county in southeastern South Dakota. Address A-79, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Boulevard, Chicago, Illinois. 16-3t

HELP WANTED

Wanted—Two good sheet metal workers in Southern city. Permanent position; \$5c per hour. Also want two first-class welders. Write full information in first letter. Please address A-76, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Boulevard, Chicago, Illinois. 15-3t

Help Wanted—We want a tinner for factory work on light galvanized iron, tin plate, copper and a good solderer. This is a fine opportunity for the right man. 80 miles from Chicago and Milwaukee, near Janesville and Beloit on C. M. St. P. and C. & N. W. Railroad. All opportunity. State wages wanted in first letter. Clinton Manufacturing Company, Clinton, Wisconsin. 16-3t

Wanted—Sales manager for large and old stove manufacturing concern in Central Indiana. Married preferred. Between the ages of thirty and forty-five, who has had actual experience selling stoves on the road, and as sales manager. No other need apply. Mail present photo together with references. Write to A-75, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Boulevard, Chicago, Illinois. 15-3t

SITUATION WANTED.

Situation Wanted—By a good reliable all around sheet metal worker. Want position in job shop or factory where they do first-class work. Address A-86, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Boulevard, Chicago, Illinois. 17-3t

Situation Wanted—A first-class tinner with 20 years' experience wants position at once. Am also a good hardware clerk. I am no plumber or windmill man. Address A-81, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Boulevard, Chicago, Illinois. 16-3t

Wanted—Position by first-class plumber and fitter, 42 years old and married. Have been 10 years as foreman in first-class shops. Nothing but first class wages considered. Address A-83, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Boulevard, Chicago, Illinois. 16-3t

Situation wanted by young married man as hardware clerk. No bad habits and not afraid of work. Have had six years' experience in the hardware line. Can also do some repair work in tin shop. Did some work as plumber's helper. Am willing to help with these if necessary. Only steady job considered. Benj. Larson, Soldiers Grove, Wisconsin. 16-3t

Situation Wanted—A young man with eight years' practical experience in various departments of the hardware and furnace business in a city of 6,000 would like to better his future. What have you to offer me? State salary, etc. Address A-78, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Boulevard, Chicago, Illinois. 15-3t

Situation Wanted by May 1st—Sheet metal worker, over 15 years' experience in general lines including cornice, skylight and special work. First-class pattern cutter, rapid and accurate. Am capable of taking charge if required. Address A-85, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Boulevard, Chicago, Illinois. 17-3t

Situation Wanted—Experienced hardware man is open for position on road or would take charge of store or a department. Married man, 41; seventeen years' experience in shelf and builders hardware, tools, stoves, paints, etc. Now employed as salesman with large wholesale and retail hardware house. References. A-82, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Boulevard, Chicago, Illinois. 16-3t

TINNERS' TOOLS

For Sale—One 30" square shears in good condition for \$40.00. Address L. T. Petersen, West 6th Street, Storm Lake, Iowa. 16-3t

Wanted—Second-hand Mueller No. 1 or No. 2 tapping machine. State price and condition. Metz Manufacturing Company, Center, Texas. 17-3t

Wanted—One 8 ft. brake. Write, stating price and condition of brake to Downey Heating and Supply Company, Milwaukee, Wisconsin. 16-3t